

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

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Los Angeles Regional Water Quality Control Board

<http://www.waterboards.ca.gov/losangeles>

**WATER QUALITY ORDER R4-2024-0258
NPDES NUMBER CA0056651, CI NUMBER 6068**

**WASTE DISCHARGE REQUIREMENTS FOR
THE UNIVERSITY OF SOUTHERN CALIFORNIA
WRIGLEY MARINE SCIENCE CENTER**

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger:	University of Southern California
Name of Facility:	Wrigley Marine Science Center
Facility Address:	No. 1 Big Fisherman Cove, Catalina Island Avalon, CA 90704 Los Angeles County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Waste Seawater	33.445	-118.483333	Pacific Ocean
002	Stormwater Runoff	33.445	-118.483333	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	May 23, 2024
This Order shall become effective on:	July 1, 2024
This Order shall expire on:	June 30, 2029
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a NPDES permit no later than:	180 days prior to the Order expiration date
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board have classified this discharge as follows:	Minor

I, Susana Arredondo, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on **the date indicated above**.

for Susana Arredondo, Executive Officer

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1. FACILITY INFORMATION

Information describing the University of Southern California (Discharger), Wrigley Marine Science Center (Facility) is summarized in Table 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), finds:

- 2.1. **Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.
- 2.2. **Background and Rationale for Requirements.** The Los Angeles Water Board developed the requirements in this Order based on information submitted as part of the application and through the Discharger's monitoring and reporting program along with other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E, and G are also incorporated into this Order.
- 2.3. **Notification of Interested Parties.** The Los Angeles Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- 2.4. **Consideration of Public Comment.** The Los Angeles Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order No. R4-2013-0172-A01 is terminated upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Los Angeles Water Board from taking enforcement action for violations of the previous Order.

3. DISCHARGE PROHIBITIONS

- 3.1. The discharge of waste shall not exceed 0.360 million gallons per day (MGD) of waste seawater from Discharge Point 001 and 0.610 million MGD of stormwater runoff from Discharge Point 002.

- 3.2. The discharge of waste at a location other than specifically described in this Order is prohibited. The discharge of waste from accidental spills or other sources is prohibited.
- 3.3. Discharges of chemical additives, including antibiotics, in the seawater system effluent are prohibited.
- 3.4. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Pacific Ocean, or other waters of the United States, are prohibited.
- 3.5. The treatment or the discharge of waste from the Facility shall not cause pollution, contamination, or nuisance as defined by section 13050 of the Water Code.
- 3.6. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life is prohibited.
- 3.7. The discharge of oil or any residuary product of petroleum to waters of the United States, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited.
- 3.8. The discharge of any radiological, chemical, or biological warfare agent into the waters of the United States is prohibited under Water Code section 13375.
- 3.9. The discharge of trash to waters of the United States or the deposition of trash where it may be discharged into waters of the United States is prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE PROHIBITIONS

4.1. Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Locations EFF-001, as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Effluent Limitations at Discharge Point 001

Parameter	Units	6-month Median	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Notes
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	milligram per liter (mg/L)	--	20	--	60	--	--
BOD 5-day @ 20°C	pounds per day (lbs/day)	--	60	--	180	--	a
Oil and Grease	mg/L	--	10	--	15	--	--
Oil and Grease	lbs/day	--	30	--	45	--	a
pH	standard units (S.U.)	--	--	--	--	6.0 to 9.0	b
Settleable Solids	ml/L	--	1.0	1.5	--	3.0	--
Total Suspended Solids (TSS)	mg/L	--	50	--	150	--	--
TSS	lbs/day	--	150	--	450	--	a

Parameter	Units	6-month Median	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Notes
Turbidity	NTU	--	50	100	150	225	--
Temperature	degrees Fahrenheit (°F)	--	--	--	--	86	c
Fecal Coliform	CFU/100 mL or MPN/100mL	--	200	--	400	--	d
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	--	30	--	110	--	e

Footnotes for Table 4

- a. The mass-based (lbs/day) effluent limitations are calculated using the maximum flow of 0.360 million gallons per day (MGD) for Discharge Point 001, as follows:
Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- b. The effluent limitations for pH are 6.0 as an Instantaneous Minimum and 9.0 as an instantaneous Maximum.
- c. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of thermal waste discharges shall not exceed the natural temperature of the receiving waters by more than 20 degrees Fahrenheit (°F).
- d. A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.
- e. A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.

End of Footnotes for Table 4

4.2. Effluent Limitations – Discharge Point 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Locations EFF-002, as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 5. Effluent Limitations at Discharge Point 002

Parameter	Units	Average Monthly	Maximum Daily	Instantaneous Maximum	Notes
BOD 5-day @ 20°C	mg/L	--	60	--	--
BOD 5-day @ 20°C	lbs/day	--	305	--	a
Oil and Grease	mg/L	--	15	--	--
Oil and Grease	lbs/day	--	76	--	a
pH	S.U.	--	--	6.0 – 9.0	b
Settleable Solids	ml/L	--	--	3.0	--
TSS	mg/L	--	150	--	--

Parameter	Units	Average Monthly	Maximum Daily	Instantaneous Maximum	Notes
TSS	lbs/day	--	760	--	a
Turbidity	NTU	--	150	--	--
Temperature	(°F)	--	--	86	c
Chronic Toxicity	Pass or Fail, % Effect (TST)	--	Pass or % Effect <50	--	d
Fecal Coliform	CFU/100 mL or MPN/100mL	200	400	--	e
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	30	110	--	f
Arsenic, TR	µg/L	--	32	--	--
Arsenic, TR	lbs/day	--	0.16	--	a
Beryllium, TR	µg/L	--	0.033	--	--
Beryllium, TR	lbs/day	--	0.00017	--	a
Copper, TR	µg/L	--	12	--	--
Copper, TR	lbs/day	--	0.061	--	a
Lead, TR	µg/L	--	8	--	--
Lead, TR	lbs/day	--	0.04	--	a
Nickel, TR	µg/L	--	20	--	--
Nickel, TR	lbs/day	--	0.10	--	a
Zinc, TR	µg/L	--	80	--	--
Zinc, TR	lbs/day	--	0.41	--	a
TCDD Equivalents	µg/L	--	3.9E-09	--	g
TCDD Equivalents	lbs/day	--	2.0E-11	--	a and g

Footnotes for Table 5

- a. The mass-based effluent limitations are calculated using the maximum flow of 0.61 MGD for Discharge Point 002, as follows:
Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- b. The effluent limitation for pH are 6.0 as an Instantaneous Minimum and 9.0 as an Instantaneous Maximum.
- c. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20°F.
- d. The MDEL for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”.
- e. A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.
- f. A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.
- g. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger

shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners. The TCDD Equivalents are calculated as follows: Dioxin-TEQ (TCDD equivalents) = Sum of Concentration of dioxin or furan congener_x (C_x) x Toxicity Equivalency Factors (TEFs) for congener_x. The TEFs are listed in the Table below.

Toxicity Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0003
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.03
2,3,4,7,8 - penta CDF	50	0.3
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0003

End of Footnotes for Table 5

4.3. Interim Effluent Limitations – Not Applicable

4.4. Land Discharge Specifications – Not Applicable

4.5. Recycling Specifications – Not Applicable

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Ocean Plan and State Water Board Resolution No. 2006-0013 and are a required part of this Order. Discharges from the Facility shall not cause the following in the Pacific Ocean:

5.1.1. State Water Resources Control Board Resolution No. 2006-0013.

Natural water quality conditions in the receiving water must not be altered as a result of the discharge(s), and marine communities must be protected from pollution. Natural ocean water quality will be determined by a comparison to the range of constituent concentrations at REF-001, or in reference areas agreed upon by participants in an approved regional monitoring program.

5.1.2. Bacterial Characteristics.

a. Water-Contact Standards

Subsection (i) of this section contains bacteria water quality objectives adopted by the State Water Board for ocean waters used for water contact recreation. Subsection (ii) describes the beach notification levels for waters adjacent to public beaches and public water contact sports areas in ocean waters.

i. State Water Board Water-Contact Objectives

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Los Angeles Water Board (i.e., waters designated as REC-1), but including all kelp beds, the following water quality objectives shall be maintained throughout the water column.

Fecal coliform

A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.

Fecal Coliform REC-1 WQO for Water-Contact in Ocean Waters

Indicator	30-day Geometric Mean	Single Sample Maximum
Fecal Coliform	200 per 100 mL	400 per 100 mL

Enterococci

A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.

Enterococci REC-1 WQO for Water-Contact in Ocean Waters*

Indicator	Geometric Mean	Statistical Threshold Value
Enterococci	30	110

* The waterbody GM shall not be greater than the GM magnitude in any six-week interval, calculated weekly. The STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

- ii. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

b. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Los Angeles Water Board, the following bacteria objectives shall be maintained throughout the water column:

The median total coliform density (for any 6-month period) shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 mL.

5.1.3. **Physical Characteristics**

The waste discharged shall not:

- a. result in floating particulates and oil and grease to be visible;
- b. cause aesthetically undesirable discoloration of the ocean surface;
- c. significantly reduced the transmittance of natural light at any point outside the initial dilution zone;
- d. change the rate of deposition of inert solids and the characteristics of inert solids in ocean sediments such that benthic communities are degraded; and,
- e. cause trash to be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

5.1.4. **Chemical Characteristics**

The waste discharged shall not:

- a. cause the dissolved oxygen concentration at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste;
- b. change the pH shall at any time more than 0.2 units from that which occurs naturally;
- c. cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions;
- d. cause the concentration of substances (as set forth in Chapter II, Table 3 of the Ocean Plan) in marine sediments to be increased to levels which would degrade indigenous biota;
- e. cause the concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life;
- f. contain nutrients at levels that will cause objectionable aquatic growths or degrade indigenous biota;
- g. cause or contribute to an exceedance of the numerical water quality Objectives in Table 3 of the Ocean Plan =. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations.

5.1.5. **Biological Characteristics**

The waste discharged shall not:

- a. degrade marine communities, including vertebrate, invertebrate, algae, and plant species;

- b. alter the natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption;
- c. cause the concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health; and,

5.1.6. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

5.2. Groundwater Limitations – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

- 6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.
- 6.1.2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
 - a. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of stormwater to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal stormwater management programs developed to comply with NPDES permits issued by the Los Angeles Water Board to local agencies.
 - b. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the federal CWA and amendments thereto.
 - c. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
 - d. Oil or oily material, chemicals, refuse, or other wastes that constitute a condition of pollution or nuisance shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
 - e. A copy of these waste discharge requirements shall be maintained at the discharge facility so as to be available at all times to operating personnel.
 - f. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not staffed at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

- g. The Discharger shall file with the Los Angeles Water Board a report of waste discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.
- h. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Los Angeles Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- i. The Discharger must notify the Los Angeles Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture an intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- j. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify the Los Angeles Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Los Angeles Water Board, 30 days prior to taking effect.
- k. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- l. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
 - i. Name and general composition of the chemical,
 - ii. Frequency of use,
 - iii. Quantities to be used,
 - iv. Proposed discharge concentrations, and
 - v. U.S. EPA registration number, if applicable.
- m. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Manager of the Watershed Regulatory Section at the Los Angeles Water Board by telephone at (213) 576-6616 or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Los Angeles Water Board within five days, unless the Los Angeles Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to NPDES No. CA0056651, CI-6068 to

losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

- n. The Discharger shall make diligent, protective efforts to reduce Facility infrastructure vulnerability to current and future impacts resulting from climate change, including but not limited to extreme wet weather events, flooding, storm surges, wildfires, and projected sea level rise when the facility is located near the ocean or discharges to the ocean.
- o. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 311 of the CWA, related to oil and hazardous substances liability.
- p. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

6.2. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and any future revisions thereto, in Attachment E.

6.3. Special Provisions

6.3.1. Reopener Provisions

- a. This Order may be modified, revoked, and reissued, or terminated for cause, including, but not limited to:
 - i. violation of any term or condition contained in this Order;
 - ii. obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts; or,
 - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

- b. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Los Angeles Water Board may revise and modify this Order in accordance with such more stringent standards.
- c. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the reasonable potential analysis (RPA).
- d. This Order may be reopened and modified, in accordance with the provisions set forth in title 40 of the Code of Federal Regulations (40 CFR) parts 122 and 124 to include requirements for the implementation of a watershed protection management approach or to include new minimum levels (MLs).

- e. This Order may be reopened for modification, or revocation and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have reasonable potential to cause, or contribute to adverse impacts on beneficial uses or degradation of water quality of the receiving waters.
- f. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption.
- g. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special studies, technical reports and additional monitoring requirements included in this Order. These special studies may be, but are not limited to, fish tissue sampling, whole effluent toxicity testing, monitoring of internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special studies, technical reports and monitoring data.
- h. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Los Angeles Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.
- i. This Order may be reopened and modified to the extent necessary, to be consistent with new or revised state-wide plans, new laws, or new regulations.

6.3.2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

- a. **Updated Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Los Angeles Water Board an updated Initial Investigation TRE workplan **within 90 days** of the effective date of this permit. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected. See section 5.6 of the Monitoring and Reporting Program (Attachment E) for an overview of Toxicity Reduction Evaluation (TRE) requirements.
- b. **Benthic Marine Life Survey.** The Discharger shall conduct a quantitative survey of benthic marine life that will be performed near the discharge and a reference site (Survey) every five years. The Survey design is due to the Los Angeles Water Board within **one year** of the effective date of this Order. (State Water Board Resolution No. 2006-0013, condition 2.j.) The Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, shall approve the Survey design. The results of the Survey must be completed and submitted to the Los Angeles Water Board **six months** before the permit expiration date.

During the last permit cycle, the Discharger fulfilled this requirement by participation in the 2018 Southern California Coastal Water Research Project

(SCCWRP) Bight '18 2022 Rocky Intertidal Study in lieu of conducting the Survey. The Discharger may continue to participate in the next regional monitoring program in lieu of conducting its own benthic marine life survey and in coordination with the Regional ASBS Monitoring as identified below (Section 6.3.2.d).

c. Metals Bioaccumulation Study.

The Discharger shall conduct a bioaccumulation study using mussels *M. californianus* to determine the concentration of metals near field (within Big Fisherman Cove) and far field (at the reference station). The results of the survey must be submitted to the Los Angeles Water Board at least **six months** prior to the Order expiration date. The Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, shall approve the study design. The study design is due to the Los Angeles Water Board within **one year** of the effective date of this Order. Based on the study results, the Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits and/or may require additional test organisms.

d. Regional ASBS Monitoring. Participation in a collaborative regional or statewide ASBS monitoring effort is encouraged. After the first year of monitoring results are reviewed (in 2025), the Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, may adjust the sediment, receiving water, and bioaccumulation monitoring required under this exception, based on the Facility's participation in an appropriate regional or statewide monitoring program.

e. Subtidal Sediment Monitoring. Once annually, the Discharger is required to collect samples of the subtidal sediment near the seawater discharge system and storm water outfall in Big Fisherman Cove and analyze the sample for Ocean Plan Table 3 constituents. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* shall be performed. Based on the first year sample results, the Los Angeles Water Board will determine specific constituents to be tested during the remainder of the permit cycle, except that acute toxicity for sediment shall be tested annually. The presence of sediment toxicity shall be estimated as specified in USEPA's *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods* (USEPA Report 600/R-94/025, June 1994), using the amphipod *Eohaustorius estuarius*.

f. Receiving Water Monitoring Report. Within **30 days** of becoming aware that receiving water monitoring results indicate that storm water discharges are causing or contributing to an alteration of natural water quality in the ASBS, as measured at the reference station (REF-001), the Discharger must submit a report to the Los Angeles Water Board. The report shall include the following:

- i. Identify those constituents in storm water that alter natural water quality;
- ii. Describe the Best Management Practices (BMPs) that are currently being implemented;

- iii. Describe the BMPs that are planned for in the Storm Water Management Plan/Program (SWMP), and additional BMPs that may be added to the SWMP;
- iv. Include a new or modified implementation schedule;

The Los Angeles Water Board may require modifications to the report. Within 30 days following approval of the report by the Los Angeles Water Board, the Discharger shall revise its SWMP to incorporate any new or modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required. If the Discharger has complied with the procedures described above and is implementing the revised SWMP, then the Discharge does not have to repeat the same procedure for continuing or recurring exceedances of the same constituent.

6.3.3. **Best Management Practices and Pollution Prevention**

The Discharger shall submit to the Los Angeles Water Board, within 90 days of the effective date of this Order, updated versions of the following:

- a. **Stormwater Management Plan (SWMP)** an updated SWMP that complies with the conditions of State Water Board Resolution No. 2006-0013 for discharges to ASBS. The SWMP shall also incorporate the following:
 - i. **Stormwater Pollution Prevention Plan (SWPPP)** that describes site-specific management practices for minimizing pollution of stormwater runoff and preventing contaminated stormwater runoff from being discharged directly to the Pacific Ocean. The SWPPP shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for pollution of stormwater runoff and the discharge of trash or hazardous waste/material; and address the feasibility of containment and/or treatment of stormwater. In addition, the SWPPP shall address and include best management practices procedures that the Discharger will implement to prohibit the discharge of trash from the Facility. The updated SWPPP shall be developed in accordance with the requirements for the evaluation included in Attachment G of this Order.
 - ii. **Best Management Practice Plan (BMPP)** that will be implemented to reduce the discharge of pollutants to the receiving water. The BMPP may be included within the SWPPP as a description of best management practices (BMPs). The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. Further, the Discharger shall ensure that the stormwater discharges from the Facility would neither cause, nor contribute to the exceedance of water quality standards and objectives, nor create conditions of nuisance in the receiving water, and that unauthorized discharges (i.e., spills) to the receiving water have been effectively prohibited. In particular, a risk assessment of each area identified by the Discharger shall be performed

to determine the potential for hazardous or toxic waste/material discharge to surface waters.

- iii. **Spill Contingency Plan (SCP)** for the Facility shall be submitted that includes a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The SCP may be substituted with an updated version of the Discharger's existing Spill Prevention Control and Countermeasure (SPCC) Plan.

The Discharger shall implement the SWMP within 10 days of the approval by the Los Angeles Water Board or no later than 90 days after submission to the Los Angeles Water Board, whichever comes first. The plans shall be reviewed annually and at the same time. Updated information shall be submitted to the Los Angeles Water Board within 30 days of revisions.

6.3.4. **Construction, Operation, and Maintenance Specifications**

The Discharger shall notify the Los Angeles Water Board within 180 days prior to any construction activity that could result in any discharge or habitat modification in the ASBS. Furthermore, the Discharger must receive approval and appropriate conditions from the Los Angeles Water Board prior to performing any significant modification, re-building, or renovation of the waterfront facilities, including the pier and dock, that could result in any discharge or habitat modification in the ASBS, according to the requirements of Section III.E.4. of the Ocean Plan. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

6.3.5. **Climate Change Effects Vulnerability Assessment and Mitigation Plan**

The Discharger shall consider the impacts of climate change as they affect the operation of the facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the Facility's operation, water supplies, water quality, and beneficial uses. For facilities that discharge to the ocean, the Climate Change Plan shall also address the impacts from sea level rise. The Climate Change Plan shall also discuss any projected changes to pollutant concentrations in the stormwater and/or receiving water. The Climate Change Plan is **due 12 months** after the effective date of this Order.

6.4. **Other Special Provisions**

6.4.1. **Nonpoint Source Management Plan (Waterfront Management Plan)**

The Discharger shall submit an updated waterfront and marine operations nonpoint source management plan (WFMP) containing appropriate management practices to address nonpoint source pollutant discharges. Appropriate management measures includes those described in the State's Nonpoint Source Program Implementation Plan for marinas and recreational boating, as applicable. The updated WFMP must be submitted to the Los Angeles Water Board within **90 days** of the effective date of this permit. The Los Angeles Water

Board, in consultation with the State Water Board's Division of Water Quality, will review the WFMP. The WFMP must be implemented within six months of its approval.

6.4.2. Program for Prevention of Biological Pollutants

The Discharger shall continue to implement a program for prevention of Biological Pollutants (non-native invasive species) in consultation with the California Department of Fish and Wildlife Marine Resources Division. (State Water Board Resolution No. 2006-0013, condition 2.q). Any non-native species found in the Santa Catalina ASBS must be reported to the State and Los Angeles Water Board and the California Department of Fish and Wildlife (CDFW). The Discharger submitted a report titled *Non-Indigenous Species Control Program at Wrigley Marine Science Center University of Southern California Wrigley Institute for Environmental Studies* in December 2014. The report outlined the purpose and processes undertaken by the research institution to implement safeguards and controls in consultation with CDFW. The Discharger shall review the programmatic and operational controls in use at the Facility and reevaluate if additional controls are needed, which may include the discussion of new or removed non-native invasive species not previously identified and in consultation with CDFW. The report must be submitted within **one year** of the effective date of this Order to the State and Los Angeles Water Board and CDFW.

6.5. Compliance Schedules – Not Applicable

7. COMPLIANCE DETERMINATION

Compliance with water quality objectives contained in the Ocean Plan and Resolution No. 2006-0013 shall be determined from samples collected at stations representative of the area within the spray field; and for natural / background water quality. For constituents other than indicator bacteria, samples shall be collected at the reference station in the ocean in the vicinity of Goat Harbor or Italian Gardens near Twin Rocks Point on the northern coast of Santa Catalina Island. In situations where water quality objectives from the Ocean Plan and from Resolution No. 2006-0013 may both be applicable, the more stringent water quality objective shall apply. Receiving water conditions not in conformance with the limitation is not necessarily a violation of this Order. The Los Angeles Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred.

If monitoring indicates that natural ocean water quality is not maintained, but there is sufficient evidence that this discharge is not contributing to the alteration of natural water quality, then the Los Angeles Water Board may make that determination. In this case, sufficient information must include runoff and seawater system effluent data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Compliance with the effluent limitations is based on all available data collected during the time period, contained in section 4 of this Order will be determined as specified below.

7.1. Single-Constituent Effluent Limitation

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML) (see Reporting Requirement 1.8. of the MRP), then the Discharger is out of compliance.

7.2. Effluent Limitations Expressed as a Sum of Several Constituents

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, constituents reported as "Not Detected" (ND) or "Detected, but Not Quantified" (DNQ) are treated as having concentrations equal to zero, provided that the applicable ML is used.

7.3. Effluent Limitations Expressed as a Median

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

- a. If the number of measurements (n) is odd, then the median will be calculated as $= X_{(n+1)/2}$; or,
- b. If the number of measurements (n) is even, then the median will be calculated as $= [X_{n/2} + X_{(n/2)+1}]/2$, i.e. the midpoint between the $n/2$ and $n/2+1$ data points.

7.4. Multiple Sample Data

When determining compliance with an AMEL or MDL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in accordance with the following procedure:

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7.5. Average Monthly (30-Day Average) Effluent Limitation (AMEL)

If the average (or when applicable, the median determined above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of calculating mandatory minimum penalties, though the Discharger may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for the purpose of calculating discretionary administrative civil liabilities. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. If multiple samples are taken the Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger may collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement 1.8. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as ND or DNQ (see Reporting Requirement 1.8. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

7.6. Average Weekly Effluent Limitation (AWEL) or 7-Day Average

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is collected during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is collected, no compliance determination can be made for that calendar week with respect to the AWEL.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

7.6. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter. For any one day during which no sample is taken, no compliance determination can be made for that day. The MDEL for chronic toxicity is exceeded when a toxicity test results in a "Fail", and the percent effect is greater than or equal to 0.50.

7.7. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a potential violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

7.8. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a potential violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

7.9. Six-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. If only one sample is collected during the time period associated with the six-month median water quality objective, the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

7.10. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1.

The null hypothesis (H_0) for the TST statistical approach is:

$$\text{Mean discharge IWC response} \leq 0.75 \times \text{Mean control response.}$$

A test result that rejects the null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” The relative “Percent Effect” at the discharge IWC is defined and reported as:

$$((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100.$$

This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent Effect” is ≥ 0.50 .

The chronic toxicity MDEL is set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach (“Pass” or “Fail”, “Percent Effect”). All NPDES effluent compliance monitoring for the chronic toxicity MDEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (H_0) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995)*. The Los Angeles Water Board’s review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the U.S. EPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the Los Angeles Water Board (40 CFR section 122.41(h)). The Los Angeles Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, the U.S. EPA, the State Water Board’s Quality Assurance Officer, or the State Water Board’s Environmental Laboratory Accreditation Program (ELAP) as needed. The Los Angeles Water Board may consider the results of any TIE/TRE studies in an enforcement action.

7.11. Mass and Concentration Limitations

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the

corresponding mass emission rate determined from that sample concentration shall also be reported as ND or DNQ.

7.12. Bacterial Standards and Analyses

The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

Where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total coliform, at a minimum, and 1 to 1000 per 100 ml for *E. coli*). The detection methods used for each analysis shall be reported with the results of the analyses.

Detection methods used for coliforms (total, fecal, *E. coli*) and *Enterococcus* shall be those presented in Table 1A of part 136 (revised August 28, 2017), unless alternate methods have been approved by U.S. EPA pursuant to 40 CFR part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.

ATTACHMENT A - DEFINITIONS

Areas of Special Biological Significance (ASBS)

Areas of Special Biological Significance are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that maintenance of natural water quality is assured. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS. ASBS are also referred to as State Water Quality Protection Areas – Areas of Special Biological Significance (SWQPA-ASBS).

Arithmetic Mean (μ)

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows: Arithmetic mean (μ) = the sum of the measured ambient water concentrations divided by the number of samples.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs)

BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including stormwater. BMPs include structural and non-structural controls, and operation maintenance procedures, which can be applied before, during, and/or after pollution-producing activities.

Bioaccumulative

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic

Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is a measure of data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Composite Sample

Composite Sample, for flow rate measurements, means the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.

- a. No fewer than eight individual sample portions taken at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each

individual sample portion shall be directly proportional to the discharge flow rate at the time of sampling; or,

- b. No fewer than eight individual sample portions taken of equal time volume taken over a 24 hour period. The time interval between each individual sample portion shall vary such that the volume of the discharge between each individual sample portion remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

For a composite sample, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted individual sample portions shall be taken during the duration of the discharge and composited. For a discharge duration of 8 hours or less, eight individual "grab samples" may be substituted and composited.

The composite sample result shall be reported for the calendar day during which composite sampling ends.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Degrade (Degradation)

Degradation shall be determined by comparison of the spray field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant* differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dredged Material

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil".

Effluent Concentration Allowance (ECA)

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document for Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays

Enclosed Bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Grab Sample

Grab Sample means an individual sample collected during a period of time not to exceed 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not occur during hydraulic peaks.

Halomethanes

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

Instantaneous Maximum Effluent Limitation

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Kelp Beds

Kelp Beds are aggregations of marine algae of the order Laminariales, including species in the genera *Macrocystis*, *Nereocystis*, and *Pelagophycus*. Kelp beds include the total foliage canopy throughout the water column.

Mariculture

Mariculture is the culture of algae, plants, and animals in marine waters independent of any pollution source.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If

the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Median Monthly Effluent Limitation (MMEL)

The MMEL is an effluent limit based on the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST. The MMEL is exceeded when the median result (i.e. two out of three) is a “fail.”

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

Minimum Level (ML)

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Natural Light

Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board.

Nonchlorinated Phenolic Compounds

Nonchlorinated Phenolic Compounds shall mean, at a minimum, the sum of Phenol, 2, 4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol.

Not Detected (ND)

Sample results which are less than the laboratory’s MDL.

Ocean Waters / Ocean Plan

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board’s 2019 California Ocean Plan.

PAHs (polynuclear aromatic hydrocarbons)

PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) as Aroclors

The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

Persistent Pollutants

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Los Angeles Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Los Angeles Water Board.

Qualifying Storm Event

Precipitation of 0.1 inch or more in a 24-hour period following at least 72 hours of dry weather.

Receiving Water

For permitted stormwater discharges and nonpoint sources, should be measured at the point of discharge(s), in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Reporting Level (RL)

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Los Angeles Water Board either from Appendix II of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Salinity

Salinity is a measure of the dissolved salts in a volume of water. Salinity shall be measured using a standard method approved by the Los Angeles Water Board (e.g. Standard Method 2520 B, EPA Method 120.1, EPA Method 160.1) and reported in parts per thousand (ppt). For

historical salinity data not recorded in parts per thousand, the Los Angeles Water Board may accept converted data at their discretion.

Significant Storm Event

A continuous discharge of stormwater for a minimum of one hour, or the intermittent discharge of stormwater for a minimum of three hours in a 12-hour period.

Six-month Median Effluent Limitation:

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows: Standard Deviation (σ) = $\sqrt{\sum(x-\mu)^2/(n-1)}$, where: x is the observed value; μ is the arithmetic mean of the observed values; and n is the number of samples.

State Water Quality Protection Areas (SWQPAs)

SWQPAs are nonterrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All Areas of Special Biological Significance (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

Statistical Threshold Value (STV)

The STV for the bacteria water quality objectives is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population. The STV for the bacteria water quality objective is 110 cfu/100mL.

Toxicity Reduction Evaluation (TRE)

TRE is a study conducted in a stepwise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Trash

Trash means all improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Waste

As used in the 2019 Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

ACRONYMS AND ABBREVIATIONS

AMEL	Average Monthly Effluent Limit
AWEL	Average Weekly Effluent Limitation
B	Background Concentration used in Reasonable Potential Analysis
BAT	Best Available Technology Economically Achievable
Basin Plan	Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20°C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Criteria used in Reasonable Potential Analysis
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR.	Code of Federal Regulations
CFU	Colony Forming Units
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	University of Southern California
DMR	Discharge Monitoring Report
DNQ	Detected but Not Quantified
E	Existing Order
ELAP	State Water Resources Control Board, Drinking Water Division, Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Wrigley Marine Science Center
gpd	gallons per day
IC	Inhibition Coefficient
LA	Load Allocations
Los Angeles Water Board	California Regional Water Quality Control Board, Los Angeles Region
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System

NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law
Ocean Plan	2019 Water Quality Control Plan for Ocean Waters of California
PCBs	Polychlorinated Biphenyls
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
RL	Reporting Limit
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SMR	Self-Monitoring Reports
SPCC	Spill Prevention Control and Countermeasures Plan
State Water Board	California State Water Resources Control Board
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TAC	Test Acceptability Criteria
TEF	Toxicity equivalency factors
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TR	Total Recoverable
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TST	Test of Significant Toxicity
TSS	Total Suspended Solid
TUc	Chronic Toxicity Unit
U.S.EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WFMP	Waterfront Management Plan
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

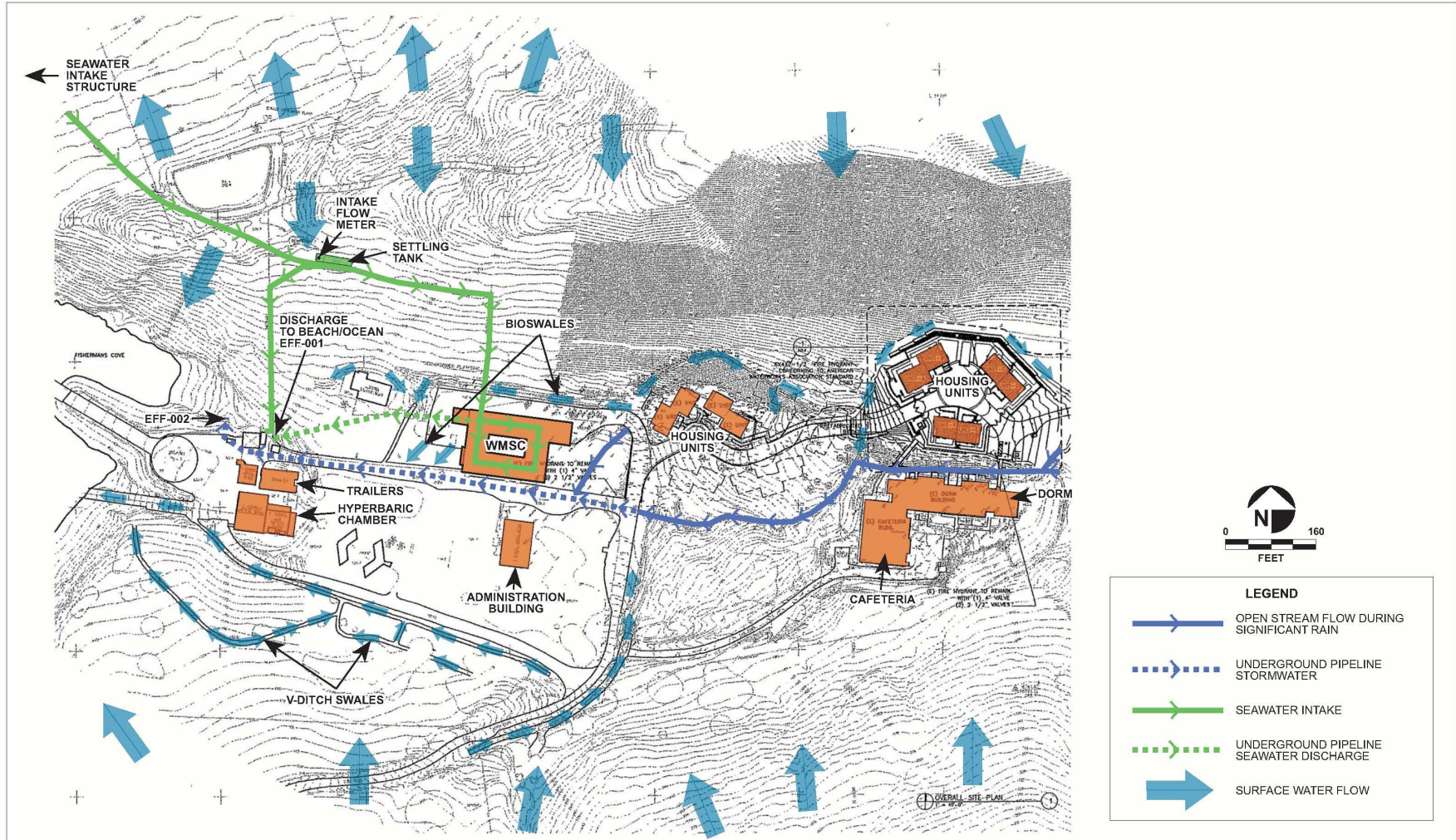
ATTACHMENT B-1 – SITE MAP



ATTACHMENT B-2 – REF-001 SITE MAP



ATTACHMENT C-1 – FLOW SCHEMATIC



Storm Water and Site Drainage Map
Wrigley Marine Science Center

Form 1-XI

Graphics/Remediation/USC NPDES/USC NPDES Map.rft

ATTACHMENT C-2 – DRAINAGE MAP & STRUCTURAL BMPs



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Storm Water Surface Drainage Map and Structural BMPs
Wrigley Marine Science Center, (November 2023)

FIGURE

1-1

ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

- 1.1.1. The Discharger must comply with all the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (Title 40 of the Code of Federal Regulations (40 CFR) § 122.41(a); California Water Code (CWC), §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
- 1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

1.3. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

1.4. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)
- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow the Los Angeles Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i); CWC, §§ 13267, 13383):

- a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(i); 40 CFR § 122.41(i)(1); CWC, §§ 13267, 13383);
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(2); CWC, §§ 13267, 13383);
- c. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(3); CWC, §§ 13267, 13383); and
- d. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i)(4); CWC, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

1.7.2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

1.7.3. Prohibition of bypass. Bypass is prohibited, and the Los Angeles Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during

normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

- c. The Discharger submitted notice to the Los Angeles Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

1.7.4. The Los Angeles Water Board may approve an anticipated bypass, after considering its adverse effects, if the Los Angeles Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. Notice

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. As of December 21, 2025, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). As of December 21, 2025, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

1.8. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

- 1.8.1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)
- 1.8.2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

- a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
- b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

1.8.3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

2.2. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR § 122.41(b).)

2.3. Transfers

This Order is not transferable to any person except after notice to the Los Angeles Water Board. The Los Angeles Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant

parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

- 3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

- 4.1. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Los Angeles Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
- b. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
- c. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
- d. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
- e. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
- f. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

- a. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
- b. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the Los Angeles Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Los Angeles Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Los Angeles Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); CWC, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

- 5.2.1. All applications, reports, or information submitted to the Los Angeles Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)
- 5.2.2. All permit applications shall be signed by either a responsible corporate officer or ranking elected official. For purposes of this provision, a responsible corporate officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Los Angeles Administrators of U.S. EPA). (40 CFR § 122.22(a)(3).)
- 5.2.3. All reports required by this Order and other information requested by the Los Angeles Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Los Angeles Water Board and State Water Board. (40 CFR § 122.22(b)(3).)
- 5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the Los Angeles Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR § 122.22(d).)

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2 and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

5.3. Monitoring Reports

5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)

5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Los Angeles Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR Part 3, 40 CFR section 122.22, and 40 CFR Part 127. (40 CFR § 122.41(l)(4)(i).)

5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Los Angeles Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)

5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

5.4. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

5.5. Twenty-Four Hour Reporting

5.5.1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also

be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2025, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

- 5.5.2. The following shall be included as information that must be reported within 24 hours:
- a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
- 5.5.3. The Los Angeles Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(ii)(B).)

5.6. Planned Changes

The Discharger shall give notice to the Los Angeles Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

- 5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or
- 5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)

5.7. Anticipated Noncompliance

The Discharger shall give advance notice to the Los Angeles Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR § 122.41(l)(2).)

5.8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting 5.5 and the applicable required data in appendix A to 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

5.9. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Los Angeles Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 CFR section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

- 6.1. The Los Angeles Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- 6.2. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person

who *knowingly* violates such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions (40 CFR § 122.41(a)(2); CWC section 13385 and 13387).

- 6.3. Any person may be assessed an administrative penalty by the Administrator of U.S. EPA, the Los Angeles Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000. (40 CFR § 122.41(a)(3)).
- 6.4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR § 122.41(j)(5)).
- 6.5. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both. (40 CFR § 122.41(k)(2)).

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Los Angeles Water Board as soon as they know or have reason to believe (40 CFR § 122.42(a)):

- 7.1.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR section 122.42(a)(1)):
- a. 100 micrograms per liter ($\mu\text{g/L}$) (40 CFR section 122.42(a)(1)(i));
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR section 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR section 122.42(a)(1)(iii)); or
 - d. The level established by the Los Angeles Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(1)(iv).)
- 7.1.2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR section 122.42(a)(2)):
- a. 500 micrograms per liter ($\mu\text{g/L}$) (40 CFR section 122.42(a)(2)(i));
 - b. 1 milligram per liter (mg/L) for antimony (40 CFR section 122.42(a)(2)(ii));
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR section 122.42(a)(2)(iii)); or
 - d. The level established by the Los Angeles Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Section 308(a) of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) section 13383 also authorizes the Los Angeles Water Board to establish monitoring, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

- 1.1. Effluent sampling stations shall be established for the point of discharge (Discharge Points 001 and 002) and shall be located where representative samples of effluent can be obtained.
- 1.2. Effluent samples shall be taken downstream of any treatment works and prior to mixing with the receiving waters.
- 1.3. The Los Angeles Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- 1.4. Pollutants shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5 (revised August 28, 2017); or where no methods are specified for a given pollutant, by methods approved by this Los Angeles Water Board or the State Water Resources Control Board (State Water Board).
- 1.5. **Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board, Division of Drinking Water Environmental Laboratory Accreditation Program (ELAP) in accordance with the provision of Water Code section 13176 or approved by the Executive Officer and must include quality assurance/quality control data with their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained.
- 1.6. Pollutants shall be analyzed within allowable holding time limits as specified in 40 CFR section 136.3. All QA/QC items must be run on the same dates the samples were analyzed, and the results shall be reported in the Los Angeles Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
- 1.7. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (U.S. EPA) guidelines, or in the MRP, the constituent or parameter analyzed, and the method or procedure used must be specified in the monitoring report.
- 1.8. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:
 - 1.8.1. An actual numerical value for sample results greater than or equal to the ML; or

1.8.2. “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s MDL but less than the ML; or,

1.8.3. “Not-Detected (ND)” for sample results less than the laboratory’s MDL with the MDL indicated for the analytical method used.

Analytical data reported as “less than” for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs are those published by the State Water Board in the *California Ocean Plan (Ocean Plan)*

- 1.9. The MLs employed for effluent analyses to determine compliance with effluent limitations shall be lower than the effluent limitations established in this Order for a given parameter as per the 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures, reporting levels (RLs), and method detection limits (MDLs).
- 1.10. The MLs employed for effluent analyses not associated with determining compliance with effluent limitations in this Order shall be lower than the lowest applicable water quality objective, for a given parameter as per the 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 CFR section 131.38). If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, RLs, and MDLs.

The Los Angeles Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Appendix II of the Ocean Plan to be included in the Discharger’s permit in any of the following situations:

- a. When the pollutant under consideration is not included in Appendix II of the Ocean Plan;
- b. When the Discharger and Los Angeles Water Board agree to include in the permit a test method that is more sensitive than that specified in Part 136 (revised August 28, 2017);
- c. When the Discharger agrees to use an ML that is lower than that listed in Appendix II of the Ocean Plan;
- d. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix II of the Ocean Plan, and proposes an appropriate ML for their matrix; or,
- e. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic

substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Los Angeles Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

- 1.11. Field analyses with short sample holding time such as pH, total chlorine residual, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 CFR part 136. All field instruments must be calibrated according to the manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency, training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Los Angeles Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, QA/QC data, and measurement values shall be clearly documented during each field analysis and submitted to the Los Angeles Water Board as part of the corresponding regular monitoring report.
- 1.12. All analyses shall be accompanied by the chain of custody, including but not limited to date and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- 1.13. The Discharger shall have, and implement, an acceptable written quality QA plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.
- 1.14. For parameters that both average monthly and daily maximum limits are specified, and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.
- 1.15. The Discharger shall ensure the results of the Discharge Monitoring Report Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis

1001 I Street, Sacramento, CA 95814

1.16. In the event stormwater or spills in the areas permitted by this Order are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

- a. Type of stormwater and spilled wastes and quantity of each;
- b. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
- c. Location of the final point(s) of disposal for each type of waste.

If no stormwater or spilled waste is transported off-site during the reporting period, a statement to that effect shall be submitted.

1.17. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

1.18. Each monitoring report shall affirm in writing that *“with the exception of field tests, all analyses were conducted at a laboratory certified for such analyses by the State Water Board, Division of Drinking Water, Environmental Laboratory Accreditation Program or approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP.”*

2. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order (latitude and longitude information in Table E-1 is approximate for administrative purposes):

Table E-1. Monitoring Station Locations

Discharge Point	Monitoring Location	Monitoring Location Description
--	INF-001	At the seawater intake structure near the bluff below the University of Southern California, Wrigley Marine Science Center sewage treatment plant spray field.
001	EFF-001	Waste seawater effluent prior to discharge to the receiving water. Latitude: 33.445 Longitude: -118.483333
002	EFF-002	Storm water runoff prior to discharge to the receiving water. Latitude: 33.445 Longitude: -118.483333
--	REF-001	The reference station in the ocean in the vicinity of Goat Harbor or Italian Gardens near Twin Rocks Point on the northern coast of Santa Catalina Island.
--	RSW-001	Receiving water immediately seaward of the surf zone in Big Fisherman Cove adjacent to the Discharge Point location.
--	SED-001	Subtidal sediment near the seawater discharge system and storm water outfall in Big Fisherman Cove.

3. INFLUENT MONITORING REQUIREMENTS

3.1. Monitoring Location INF-001

The Discharger shall monitor seawater flows into the Facility (intake) at INF-001 as follows:

Table E-2. Intake Monitoring at INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total Coliform	CFU/100 mL or MPN/100mL	Grab	3/Year	a and b
Fecal Coliform	CFU/100 mL or MPN/100mL	Grab	3/Year	a and b
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	Grab	3/Year	a and b

Footnotes for Table E-2

- a. Samples must be collected at the seawater intake structure during three storm events per year that result in runoff from the spray field hillside and measured for Ocean Plan indicator bacteria. The Los Angeles Water Board may eliminate this requirement if changes are made to the Discharger’s sewage plant (regulated under Order No. 94-114) or treated sewage effluent system that would absolutely eliminate the possibility of contaminants entering the Area of Special Biological Significance (ASBS).
- b. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of Part 136, unless alternate methods have been approved in advance by USEPA pursuant to Part 136. See section 7.13. of the Order (Compliance Determination, Bacterial Standards and Analyses) for additional specifications.

End of Footnotes for Table E-2

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Location EFF-001

The Discharger shall monitor waste seawater effluent at EFF-001 prior to discharge through Discharge Point 001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding minimum level:

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Flow	gpd	Meter	Continuous	a
Biochemical Oxygen Demand (BOD) 5-day @20°C	mg/L	24-Hour Composite	1/Quarter	b
Oil and Grease	mg/L	Grab	1/Quarter	b
pH	Standard units	Grab	1/Month	b and c
Settleable Solids	mL/L	Grab	1/Quarter	b
Total Suspended Solids (TSS)	mg/L	24-Hour Composite	1/Quarter	b
Turbidity	NTU	24-Hour Composite	1/Quarter	b
Salinity	ppm	24-Hour Composite	2/Year	b and c
Temperature	°F	Grab	1/Month	b and c
Chlorine, Total Residual	µg/L	Grab	1/Quarter	b and c
Ammonia (as N)	mg/L	24-Hour Composite	2/Year	b and c
Chronic Toxicity	Pass or Fail, % Effect	24-Hour Composite	1/Quarter	b, c, and d
Total Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, e, and f
Fecal Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, e, and f
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, e, and f
Copper, Total Recoverable	µg/L	24-Hour Composite	1/Quarter	b and c
Lead, Total Recoverable	µg/L	24-Hour Composite	1/Quarter	b and c
Selenium, Total Recoverable	µg/L	24-Hour Composite	1/Quarter	b and c
Zinc, Total Recoverable	µg/L	24-Hour Composite	1/Quarter	b and c
Remaining Ocean Plan Table 3 Constituents (except acute toxicity)	µg/L	Grab or 24-Hour Composite	2/Year	b, c, g and h

Footnotes for Table E-3

- a. Total daily flow and peak daily flows must be reported quarterly to the Los Angeles Water Board.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan (Attachment G), the analytical method with the lowest ML must be selected. For metal analysis, samples must be analyzed by the approved analytical method with the lowest minimum detection limit.

- c. During the first year of the permit term, two effluent samples must be collected from the waste seawater discharge (at the same time as the reference samples at REF-001), once during dry weather and once during wet weather, (i.e., a storm event). Samples collected at the reference station will represent natural water quality for all Ocean Plan constituents except indicator bacteria and total chlorine residual. All of these samples must be analyzed for all Ocean Plan Table 3 constituents, pH, salinity, and temperature, except that samples collected at the reference station do not require toxicity testing; instead, samples collected at the reference station must be analyzed for Ocean Plan indicator bacteria. Based on the results from the first year, the Los Angeles Water Board will determine the frequency of sampling (at a minimum, annually during wet weather) and the constituents to be tested during the remainder of the permit cycle, except that ammonia (as N), pH, salinity, and temperature must be tested at least annually. Chronic toxicity, using the most sensitive species, must be tested at least annually for the waste seawater effluent. (State Water Board Resolution No. 2006-0013, condition 2.I.)
- After one year of monitoring using the TST approach that consistently demonstrates compliance, the Discharger may request a decrease in the monitoring frequency. The Executive Officer will review the request, determine if the requested changes are appropriate and subsequently issue a response. The approved monitoring frequency shall be at least as stringent as the requirements included in Resolution No. 2006-0013.
- d. The Discharger shall conduct whole effluent toxicity monitoring as outlined in Section 5. The Maximum Daily Single Result shall be reported as "Pass or Fail" with a "% Effect". Please refer to Section 5.8. for the accelerated monitoring schedule.
- e. Minimum of five samples, all within any 30-day period, shall be collected once every sampling event. One sampling event shall be conducted in the wet weather and one during the dry weather. A six-week rolling geometric mean of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.
- f. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 CFR Part 136 (revised July 1, 2009), unless alternate methods have been approved by USEPA pursuant to 40 CFR Part 136 or improved methods have been determined by the Executive Officer and/or USEPA. See Section 7.13. of the Order (Compliance Determination, Bacterial Standards and Analyses) for additional specifications.
- g. The Discharger shall collect either "grab" or "24 hour composite" samples based on characteristics of each constituent. 40 CFR Part 136 specifies that grab samples must be collected for pH, temperature, dissolved oxygen, chlorine, purgeable organics, sulfides, oil and grease, coliform bacteria and cyanide.
- h. Ocean Plan Table 3 constituents as defined by the 2019 Ocean Plan, described in Section 4.3.3. of the Fact Sheet.

End of Footnotes for Table E-3

4.2. Monitoring Location EFF-002

The Discharger shall monitor stormwater runoff at EFF-002 prior to discharge through Discharge Point 002 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding minimum level:

Table E-4. Effluent Monitoring at EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Flow	gpd	Estimated	During Each Discharge Event	a
Biochemical Oxygen Demand (BOD) 5-day @20°C	mg/L	Grab	2/Year	b, c, and d
Dissolved Oxygen	mg/L	Grab	2/Year	b, c, and d
Oil and Grease	mg/L	Grab	2/Year	b, c, and d
pH	Standard units	Grab	2/Year	b, c, and d
Settleable Solids	mL/L	Grab	2/Year	b, c, and d
Total Suspended Solids (TSS)	mg/L	Grab	2/Year	b, c, and d
Turbidity	NTU	Grab	2/Year	b, c, and d
Temperature	°F	Grab	1/Month	b and c
Total Chlorine Residual	µg/L	Grab	2/Year	b, c, and d
Chronic Toxicity	Pass or Fail, % Effect	Grab	2/Year	b, c, d, and e
Total Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, d, and f
Fecal Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, d, and f
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	Grab	2/Year	b, c, d, and f
Arsenic, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
Beryllium, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
Chromium, Hexavalent	µg/L	Grab	2/Year	b, c, d, g, and h
Copper, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
Lead, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
Nickel, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
Zinc, Total Recoverable	µg/L	Grab	1/Month	b, c, d, and g
TCDD Equivalents	µg/L	Grab	2/Year	b, c, d, and i
Remaining Ocean Plan Table 3 Constituents (except acute toxicity)	µg/L	Grab	1/Year	b, c, d, and j

Footnotes for Table E-4

- a. Total daily flow for each storm event must be reported quarterly to the Los Angeles Water Board.
- b. Sampling shall be performed during wet-weather, during the first hour of discharge, at the same time as the receiving water sampling at RSW-001, the seawater effluent sampling at EFF-001,

and the reference sampling at REF-001 may be collected immediately following a storm event but in no case more than 24 hours after, if sampling conditions are unsafe during the storm. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, then no monitoring is required. In the corresponding monitoring report, the Discharger will indicate under the statement of perjury that no effluent was discharged to surface water during the reporting period.

- c. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan (Attachment G), the analytical method with the lowest ML must be selected. For metal analysis, samples must be analyzed by the approved analytical method with the lowest minimum detection limit.
- d. Once annually, during wet weather (storm event), the stormwater runoff effluent and the receiving water adjacent to the seawater and stormwater discharge system must be sampled and analyzed for Ocean Plan Table 3 constituents. The receiving water in Big Fisherman Cove must also be monitored for Ocean Plan indicator bacteria water quality objectives. The sample location for the receiving water will be immediately seaward of the surf zone in Big Fisherman Cove adjacent to the outfall location. Storm water runoff and receiving water must be sampled at the same time as the seawater effluent and reference sampling. Based on the first year sample results, the Los Angeles Water Board shall determine the frequency of sampling and the constituents in the storm water runoff and receiving water to be tested during the remainder of the permit term, except that indicator bacteria and chronic toxicity (using the most sensitive species) for receiving water must be tested annually during a storm event. (State Water Board Resolution No. 2006-0013, condition 2.m.)

After one year of monitoring using the TST approach that consistently demonstrates compliance, the Discharger may request a decrease in the monitoring frequency. The Executive Officer will review the request, determine if the requested changes are appropriate and subsequently issue a response. The approved monitoring frequency shall be at least as stringent as the requirements included in Resolution No. 2006-0013.

- e. The Discharger shall conduct whole effluent toxicity monitoring as outlined in Section 5. The Maximum Daily Single Result shall be reported as "Pass or Fail" with a "% Effect". Sufficient storm water shall be collected in case the TIE is required following a failed initial toxicity test. Please refer to Section 6.8. for the toxicity identification evaluation (TIE) procedure.
- f. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 CFR Part 136, unless alternate methods have been approved in advance by USEPA pursuant to 40 CFR Part 136. See Section 7.13. of the Order (Compliance Determination, Bacterial Standards and Analyses) for additional specifications.
- g. The Discharger must sample the first discharge event of every month during which a discharge occurs.
- h. Dischargers have the option to meet this objective as a total chromium objective.
- i. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners. The TCDD Equivalents are calculated as follows: Dioxin-TEQ (TCDD equivalents) = Sum of Concentration of dioxin or furan congener_x (C_x) x Toxicity Equivalency Factors (TEFs) for congener_x. The TEFs are listed in the Table below.

Toxicity Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0003
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.03
2,3,4,7,8 - penta CDF	50	0.3
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0003

- j. Ocean Plan Table 3 constituents as defined by the 2019 Ocean Plan, described in Section 4.3.3. of the Fact Sheet.

End of Footnotes for Table E-4

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic toxicity IWC for the discharges at Discharge Points 001 and 002 are 100 percent effluent.

5.2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. Sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

5.3. Chronic Marine Species and Test Methods

If effluent samples are collected from Discharge Points discharging to receiving waters with salinity ≥ 1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with the test species provided in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

- A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).
- A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
- A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

5.4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this permit's first required sample collection. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle.

Rescreening is required at least once per five (5) years. The Discharger shall rescreen the three species listed above for marine and freshwater and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive, or if there is ambiguity, then the Discharger shall proceed with suites of screening tests using enough collected effluent for a minimum of three, but not to exceed five suites.

5.5. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manuals previously referenced. Additional requirements are specified below.

5.5.1. The discharge is subject to a determination of "Pass" or "Fail" and "Percent Effect" from a chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity/Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1 and Appendix B, Table B-1,

The null hypothesis (H0) for the TST statistical approach is:

Mean discharge IWC response $\leq 0.75 \times$ Mean control response.

A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as:

$((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100.$

This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of WET, only two test concentrations

(i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

- 5.5.2. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail”. This requirement is not applicable to the industrial storm water discharge.
- 5.5.3. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, then the Discharger must re-sample and re-test within 14 days. For stormwater discharges, the Discharger must re-sample and re-test at the subsequent discharge event.
- 5.5.4. Dilution water and control water (including brine controls) should be either the receiving water itself or laboratory water that has been prepared and utilized as outlined in the test methods manual. If the dilution water and control water differ from the culture water of the test organism, a second control using the culture water should also be employed.
- 5.5.5. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.
- 5.5.6. All reference toxicant test results should be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR part 136) (EPA 821-B-00-004, 2000).
- 5.5.7. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

5.6. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall update and submit the initial investigation TRE work plan to the Executive Officer of the Los Angeles Water Board for approval within **90 days** of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use U.S. EPA manual U.S. EPA/833B-99/002 (municipal) or its most current version or U.S. EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989) as guidance. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the work plan shall include:

- A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility.
- If a Toxicity Identification Evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

5.7. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail" and % Effect ≥ 50 "

The Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted. Once the Permittee becomes aware of this result, the Permittee shall implement an accelerated monitoring schedule within 5 calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Permittee shall ensure that the first of six accelerated monitoring tests is initiated within seven calendar days of the Permittee becoming aware of the result. The accelerated monitoring schedule shall consist of six toxicity tests, conducted at approximately two-week intervals, over a twelve-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass," the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail," the Permittee shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

5.8. Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process

5.8.1. Preparation and Implementation of a Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, U.S. EPA manuals: *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833B-99/002, 1999), U.S. EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989) and, within 30 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

- Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.
- Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
- A schedule for these actions, progress reports, and the final report.

5.8.2. TIE Implementation. A toxicity test sample is immediately subject to TIE procedures to identify the causes of toxicity using the same species and test method and, as guidance, EPA manuals: *Methods for Aquatic Toxicity*

Identification Evaluations: Phase I Toxicity Characterization Procedures (EPA/600/6-91/003, 1991); *Chronic TIE Manual: Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase I* (EPA/600/6-91/005F, 1992); *Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

- 5.8.3. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and stormwater control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
- 5.8.4. The Discharger shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE process is taking place.
- 5.8.5. The Los Angeles Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may end at any stage if monitoring finds there is no longer toxicity.
- 5.8.6. The Los Angeles Water Board may consider the results of any TRE/TIE studies in an enforcement action.

5.9. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter, "Report Preparation," including:

- a. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date.
- b. A summary of water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- c. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1.
- d. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final

TIE/TRE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.

- e. Statistical program (e.g., TST calculator, Comprehensive Environmental Toxicity Information System (CETIS), etc.) output results, including graphical plots, for each toxicity test.
- f. Tabular data and graphical plots clearly showing the laboratory’s performance for the reference toxicant, for each solution, for the previous 20 tests and the laboratory’s performance for the control mean, control standard deviation, and control coefficient of variation, for each solution, for the previous 12-month period.
- g. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Los Angeles Water Board Chief Deputy Executive Officer or the Executive Officer.

6. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

7. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

8. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

8.1. Monitoring Location REF-001 (Reference Station)

The Discharger shall monitor the Natural Water Quality Reference Station REF-001 as follows.

Table E-5. Receiving Water Monitoring at REF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Ammonia	mg/L	Grab	2/Year	a and b
pH	Standard units	Grab	2/Year	a and b
Salinity	ppm	Grab	2/Year	a and b
Temperature	°F	Grab	2/Year	a and b
Total Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	a, b, and c
Fecal Coliform	CFU/100 mL or MPN/100mL	Grab	2/Year	a, b, and c
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	Grab	2/Year	a, b, and c
Remaining Ocean Plan Table 3 Constituents (except acute and chronic toxicity)	µg/L	Grab	2/Year	a, b, and d

Footnotes for Table E-5

- a. During the first year of the permit term, two effluent samples must be collected from the waste seawater discharge (at the same time as the reference samples at REF-001), once during dry weather and once during wet weather, (i.e., a storm event). Samples collected at the reference station will represent natural water quality for all Ocean Plan constituents except indicator bacteria and total residual chlorine. All of these samples must be analyzed for all Ocean Plan Table 3 constituents, pH, salinity, and temperature, except that samples collected at the

reference station do not require toxicity testing; instead, samples collected at the reference station must be analyzed for Ocean Plan indicator bacteria. Based on the results from the first year, the Los Angeles Water Board will determine the frequency of sampling (at a minimum, annually during wet weather) and the constituents to be tested during the remainder of the permit cycle, except that ammonia (as N), pH, salinity, and temperature must be tested at least annually. Chronic toxicity using the most sensitive species must be tested at least annually for the waste seawater effluent. (State Water Board Resolution No. 2006-0013, condition 2.I.)

- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan, the analytical method with the lowest ML must be selected. For metal analysis, samples must be analyzed by the approved analytical method with the lowest minimum detection limit.
- c. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 CFR Part 136, unless alternate methods have been approved in advance by U.S. EPA pursuant to 40 CFR Part 136. See Section 7.13. of the Order (Compliance Determination, Bacterial Standards and Analyses) for additional specifications.
- d. Ocean Plan Table 3 constituents as defined by the 2019 Ocean Plan, described in Section 4.3.3. of the Fact Sheet.

End of Footnotes for Table E-5

8.2. Monitoring Location RSW-001 (Receiving Water Station)

The Discharger shall monitor receiving water in Big Fisherman Cove at RSW-001 as follows.

Table E-6. Receiving Water Monitoring at RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Dissolved Oxygen	mg/L	Grab	1/Year	a and b
Turbidity	NTU	Grab	1/Year	a and b
Chronic Toxicity	Pass or Fail; % Effect	Grab	1/Year	a, b, and c
Total Coliform	CFU/100 mL or MPN/100mL	Grab	1/Year	a, b, and d
Fecal Coliform	CFU/100 mL or MPN/100mL	Grab	1/Year	a, b, and d
<i>Enterococcus</i>	CFU/100 mL or MPN/100mL	Grab	1/Year	a, b, and d
Remaining Ocean Plan Table 3 Constituents (except acute toxicity)	µg/L	Grab	1/Year	a, b, and e

Footnotes for Table E-6

- a. Once annually, during a wet weather (storm event), the stormwater runoff effluent and the receiving water adjacent to the seawater and stormwater discharge system must be sampled and analyzed for Ocean Plan Table 3 constituents. The receiving water in Big Fisherman Cove must also be monitored for Ocean Plan indicator bacteria water quality objectives. The sample location for the receiving water will be immediately seaward of the surf zone in Big Fisherman Cove adjacent to the outfall location. Storm water runoff and receiving water must be sampled at the same time as the seawater effluent and reference sampling. Based on the first year

sample results, the Los Angeles Water Board shall determine the frequency of sampling and the constituents in the storm water runoff and receiving water to be tested during the remainder of the permit term, except that indicator bacteria and chronic toxicity (using the most sensitive species) for receiving water must be tested annually during a storm event. (State Water Board Resolution No. 2006-0013, condition 2.m.)

- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan (Attachment G), the analytical method with the lowest ML must be selected. For metal analysis, samples must be analyzed by the approved analytical method with the lowest minimum detection limit.
- c. After one year of monitoring using the TST approach that consistently demonstrates compliance, the Discharger may request a decrease in the monitoring frequency. The Executive Officer will review the request, determine if the requested changes are appropriate and subsequently issue a response. The approved monitoring frequency shall be at least as stringent as the requirements included in Resolution No. 2006-0013.
- d. Detection methods used for coliforms (total and fecal) and Enterococcus shall be those presented in Table 1A of 40 CFR Part 136, unless alternate methods have been approved in advance by U.S. EPA pursuant to 40 CFR Part 136. See Section 7.13. of the Order (Compliance Determination, Bacterial Standards and Analyses) for additional specifications.
- e. Ocean Plan Table 3 constituents as defined by the 2019 Ocean Plan, described in Section 4.3.3. of the Fact Sheet.

End of Footnotes for Table E-6

8.3. Groundwater Monitoring – Not Applicable

9. OTHER MONITORING REQUIREMENTS

9.1. Subtidal Sediment Monitoring Location SED-001

The Discharger shall monitor subtidal sediment in Big Fisherman Cove at SED-001 as follows:

Table E-7. Subtidal Sediment Monitoring at SED-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Acute Toxicity	TUa	Grab	1/Year	a, b, and c
Remaining Ocean Plan Table 3 Constituents (except chronic toxicity)	µg/L	Grab	1/Year	a and d

Footnotes for Table E-7

- a. Samples collected for testing should be consistent with the sampling procedure outlined in the *Southern California Bight 2018 Regional Marine Monitoring Survey (Bight '18) Sediment Quality Assessment Field Operations Manual, Section VIII, Benthic Sampling*. All samples will be tested in accordance with USEPA or American Society for Testing and Materials (ASTM) methodologies where such methods exist. Where no U. S. EPA or ASTM methods exist, the State Water Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the California Department of Health Services in accordance with Water Code section 13176.

- b. As required by Special Provisions, Section 6.3.2.e of this Order, once annually, the subtidal sediment near the seawater discharge system and storm water outfall in Big Fisherman Cove must be sampled and analyzed for Ocean Plan Table 3 constituents. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. Based on the results from the first year, the Los Angeles Water Board shall determine the frequency of sampling and the constituents to be tested during the remainder of the permit term, except that acute toxicity for sediment shall be tested annually. (State Water Board Resolution 2006-0013, condition 2.n.)
- c. The presence of sediment toxicity shall be estimated as specified in USEPA's *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods* (USEPA Report 600/R-94/025, June 1994), using the amphipod *Eohaustorius estuarius*.
- d. Ocean Plan Table 3 constituents as defined by the 2019 Ocean Plan, described in Section 4.3.3. of the Fact Sheet.

End of Footnotes for Table E-7

9.2. Benthic Marine Life Survey

Within six months before the end of the permit (permit expiration), the Discharge must submit the results of the quantitative survey of benthic marine life to the Los Angeles Water Board. Upon review of study results, the Los Angeles Water Board, in consultation with the State Water Boards Division of Water Quality, may adjust the study design for future permits or add additional test organisms. (State Water Board Resolution No. 2006-0013, condition 2.j)

9.3. Metals Bioaccumulation Study

The Discharger must conduct a bioaccumulation study using mussels (*Mytilus californianus*) to determine the concentration of metals near field (within Big Fisherman Cove) and far field (at the reference station). The results of the survey must be submitted to the Los Angeles Water Board at least six months prior to the end of the permit (permit expiration). Upon review of study results, the Los Angeles Water Board, in consultation with the State Water Boards Division of Water Quality, may adjust the study design for future permits or add additional test organisms. (State Water Board Resolution No. 2006-0013, condition 2.k)

9.4. Regional ASBS Monitoring

The Discharger may participate in regional monitoring activities coordinated by the Southern California Coastal Water Research Project (SCCWRP), and other appropriate agencies approved by the Los Angeles Water Board and U.S. EPA in lieu of conducting regional monitoring its own benthic marine life survey.

9.5. Rainfall Monitoring

The Discharger shall measure and record the rainfall on each day of the month or submit the data obtained from the nearest rain gauge monitoring station. The location of the rain gauge utilized and the distance from the Facility and any other information shall be included in each monitoring report.

9.6. Stormwater Visual Observation

The Discharger shall make visual observations of all stormwater discharge locations during at least one storm event per month that produces a significant discharge of stormwater. Observations shall note the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor at the stormwater discharge locations. A "significant stormwater discharge" is a continuous discharge of stormwater for a minimum of one hour, or the intermittent discharge of stormwater for a minimum of 3 hours in a 12-hour period.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

- 10.1.1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- 10.1.2. If there is no discharge during any reporting period, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.
- 10.1.3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.
- 10.1.4. The Discharger shall inform the Los Angeles Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
- 10.1.5. The Discharger shall report the results of chronic toxicity testing, TRE, and TIE as required in Attachment E, Section 5.

10.2. Self-Monitoring Reports (SMRs)

- 10.2.1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site:
<https://www.waterboards.ca.gov/ciwqs/index.html>
The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
- 10.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under Sections 3 through 9. The Discharger shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any

pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

10.2.3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit Effective Date	All	Submit with quarterly SMR
1/Month	Permit Effective Date	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
1/Quarter	Permit Effective Date	January 1 through March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
3/Year During Storm Event	Permit Effective Date	January 1 through March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
2/Year	Permit Effective Date	January 1 through March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
1/Year	Permit Effective Date	January 1 through December 31	February 1

10.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory’s MDL, shall be reported as “Detected, but Not Quantified,” or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 10.2.5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A. For purposes of reporting and administrative enforcement by the Los Angeles Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
- 10.2.6. **Multiple Sample Data.** When determining compliance with an Average Monthly Effluent Limitation (AMEL) or Maximum Daily Effluent Limitation (MDEL) for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
- 10.2.7. **SMRs.** The Discharger shall submit SMRs in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry

into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

- b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

10.3. Discharge Monitoring Reports (DMRs)

DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at:

https://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring

10.4. Other Reports

- 10.4.1. The Discharger shall report the results of any special studies, acute toxicity testing, chronic toxicity testing, TRE/TIE, and SWMP required by Special Provisions – Section 6.3.2. of this Order. The Discharger shall submit reports with the first quarterly SMR scheduled to be submitted on or immediately following the report due date.
- 10.4.2. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Los Angeles Water Board:
 - a. Updated Initial Investigation TRE workplan
 - b. Updated SWMP
 - c. Updated Waterfront Management Plan (WFMP) (Nonpoint Source Management Plan)
- 10.4.3. Within one year of the effective date of this permit, the Discharger is required to submit the following required by Special Provisions of this Order to the Los Angeles Water Board:
 - a. Benthic Marine Life Survey Design
 - b. Metals Bioaccumulations Study Design
 - c. Program for Prevention of Biological Pollutants
- 10.4.4. The SWMP and WFMP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of trash and pollutants discharged from the Facility are addressed. All changes or revisions to the SWMP and WFMP shall be submitted to the Los Angeles Water Board within 30 days of revisions.
- 10.4.5. Within 12 months from the effective date of this Order, the Discharger is required to submit a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage

climate change related-effects associated with the facility operation,
water supplies, collection system, water quality and beneficial uses.

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ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the Los Angeles Water Board incorporates this Fact Sheet as findings of the Los Angeles Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittee.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B191035002
Discharger	University of Southern California
Name of Facility	Wrigley Marine Science Center
Facility Address	No. 1 Big Fisherman Cove, Catalina Island, Avalon, CA 90704, Los Angeles County
Facility Contact, Title and Phone	Dr. John Heidelberg, Director (213) 740-5791
Authorized Person to Sign and Submit Reports	Lauren Czarnecki Oudin, Scientific Operations Manager (310) 510-4002
Mailing Address	1 Big Fisherman Cove, P.O. Box 5069, Avalon, CA 90704
Billing Address	1 Big Fisherman Cove, P.O. Box 5069, Avalon, CA 90704
Type of Facility	Environmental and Sustainability Research and Education Center
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N
Recycling Requirements	N/A
Facility Permitted Flow	Discharge Point 001 – 0.360 million gallons per day (MGD) Discharge Point 002 – 0.61 MGD (10-year 24 hour storm event)
Facility Design Flow	Discharge Point 001 – 0.360 MGD Discharge Point 002 – Not Applicable
Watershed	Pacific Ocean
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean Waters

1.1. The University of Southern California (hereinafter Discharger) is the owner and operator of the Wrigley Marine Science Center (hereinafter Facility), a marine aquarium and

education facility. For the purposes of this Order, references to the “Discharger” or “Permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- 1.2. The Facility discharges wastewater and stormwater runoff to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R4-2013-0172, adopted on November 7, 2013. Order R4-2013-0172 was amended on December 10, 2015, to increase the discharge flow limit at Discharge Point 001 from 0.180 MGD to 0.360 MGD based on measured flow. A continuous flow meter at Discharge Point 001 was used to reflect conditions more accurately. Modification to the Order was authorized pursuant to 40 CFR section 122.62(a)(2) based on the receipt of new information. The amended Order R4-2013-0172-A01 expired on December 26, 2018.
- 1.3. Federal regulations 40 CFR section 122.46 limits the duration of NPDES permits to a fixed term not to exceed five years. However, pursuant to 40 CFR section 122.6(d)(1) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on May 22, 2018. Supplemental information was requested, and the application was deemed complete on December 12, 2018. A site visit was conducted on August 17, 2021, to observe operations and collect additional data to develop permit limitations and conditions. The terms and conditions of the current Order have been continued and remain in effect until new WDRs and NPDES Permit are adopted. Attachment B provides maps of the area and around the Facility. Attachment C provides flow schematic of the Facility.

2. FACILITY DESCRIPTION

The Facility, an environmental and sustainability research and education facility at Big Fisherman Cove, is on the northern end of Santa Catalina Island, Los Angeles County, California. The Facility was established in 1965 and the majority of the existing buildings and structures were constructed between 1966 and 1972. The Facility includes laboratories, dormitories, a cafeteria, office trailers, and a set of waterfront buildings. Scientists and educators, primarily from the University of Southern California, the University of California, and the California State University system, use the Facility for research. In addition, the Facility operates public outreach programs for students.

An intake system delivers seawater to the laboratories and waterfront area. Seawater is pumped continuously from a sub-marine intake into laboratory aquaria. Intake water is used in the laboratory and in the large holding tanks and experimental aquaria which are located within the Facility at the waterfront and discharged at Discharge Point 001. The intake water is passed through a macro-screen, which is used to prevent the intake of kelp. The intake water does not receive additional treatment prior to use. Intake water is pumped to a 15,000-gallon holding tank for storage. Water gravity flows from the holding tank to the laboratory and aquaria. The intake structure is located at Blue Cavern Point and consists of two 6-inch polyvinyl chloride (PVC) pipes submerged 15 feet below the water surface and about 50 feet offshore.

The Discharger also operates the wastewater treatment plant for the Facility. Discharges from the wastewater treatment plant are regulated under a separate Order (Order No. 94-114).

2.1. Description of Wastewater and Biosolids Treatment or Controls

The waste seawater discharge is composed of seawater that has been supplied via the intake structure and holding tank to the laboratory and aquaria for purposes of maintaining marine animals and plants. The seawater is not heated, cooled, filtered, treated, or recirculated. All of the seawater used in various parts of the Facility are brought together and commingled at the waterfront and discharged at the beach on the north side of Big Fisherman Cove. The total waste seawater flow is up to 0.360 MGD.

Stormwater runoff from approximately 45 acres is discharged at Big Fisherman Cove beach. While no treatment is provided for stormwater, the runoff from smaller precipitation events infiltrates into best management practices (BMPs) such as vegetated swales installed throughout the Facility. Areas contributing to stormwater runoff include the waterfront area, a small portion of the laboratory building area, the main stormwater culvert that drains a watershed area with abandoned silver mines, and an unpaved storage area referred to as the maintenance and storage yard area, located at the top of the hill, which has been utilized to store marine and decommissioned laboratory equipment as well as parts storage for boats, construction equipment, vehicles and other miscellanea. The estimated storm water runoff based on a 10-year 24-hour storm event is 0.61 MGD.

In 2008, the Discharger segregated stormwater and waste seawater that were previously commingled. As a result of the modifications, waste seawater and stormwater are currently discharged through two separate pipes, located adjacent to each other. The discharges are monitored separately as Discharge Point 001 (waste seawater) and Discharge Point 002 (stormwater runoff). All other waste waters from the Facility are discharged to the community sewer system.

2.2. Discharge Points and Receiving Waters

Waste seawater and stormwater runoff discharges to surface waters at the following discharge points:

Discharge Point No. 001: Discharge of waste seawater to the Pacific Ocean at approximate coordinates: Latitude 33.445, Longitude -118.483333.

Discharge Point 002: Discharge of stormwater runoff to the Pacific Ocean, at approximate coordinates: Latitude 33.445, Longitude -118.483333.

The receiving water for the ocean discharge was designated by the State Water Board as the Northwest Santa Catalina Island ASBS No. 25 on March 21, 1974, through Resolution No. 74-28.

2.3. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Historic effluent limitations contained in Order R4-2013-0172-A01 for discharges from Discharge Point 001 and 002 (Monitoring Location EFF-001 and EFF-002, respectively) and representative monitoring data from January 1, 2018 to September 30, 2023 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at Discharge Point 001

Parameter	Units	6 Month Median	Avg. Monthly	Max Daily	Instantaneous Maximum	Highest Avg. Monthly Discharge	Highest Daily Discharge
BOD 5-day @ 20°C	Milligram per liter (mg/L)	--	20	60	60	Non Detect (ND)	ND
Oil and Grease	mg/L	--	10	15	15	3.4	3.4
pH	Standard Units	--	--	--	6.0 – 9.0	7.39 - 8.16	7.39 - 8.16
Settleable Solids	Milliliter per liter (ml/L)	--	1.0	1.5	3.0	ND	ND
TSS	mg/L	--	50	150	150	18	18
Turbidity	NTU	--	50	100	150	1	1
Temperature	°F	--	--	--	86	74.84	74.84
Chronic Toxicity	Pass or Fail, % Effect (TST)	--	Pass	Pass or % Effect <50		Pass	Pass
Total Coliform	CFU/100 mL or MPN/100 mL	--	1,000	10,000		276	540
Fecal Coliform	CFU/100 mL or MPN/100 mL	--	200	400	--	4.5	4.5
<i>Enterococcus</i>	CFU/100 mL or MPN/100 mL	--	35	104	--	130	130
Copper, Total Recoverable (TR)	(µg/L)	3	--	12	--	0.723	0.723

Table F-3. Historic Effluent Limitations and Monitoring Data at Discharge Point 002

Parameter	Units	6 Month Median	Avg. Monthly	Max Daily	Instantaneous Maximum	Highest Avg. Monthly Discharge	Highest Daily Discharge
BOD 5-day @ 20°C	mg/L	--	20	--	60	3.9	3.9
Oil and Grease	mg/L	--	10	--	15	1.4	1.4
pH	S.U.	--	--	--	6.0 – 9.0	7.74	7.74
Settleable Solids	ml/L	--	1.0	1.5	3.0	5.5	5.5
TSS	mg/L	--	50	--	150	1000	1000

Parameter	Units	6 Month Median	Avg. Monthly	Max Daily	Instantaneous Maximum	Highest Avg. Monthly Discharge	Highest Daily Discharge
Turbidity	NTU	--	50	100	150	650	650
Chronic Toxicity	Pass or Fail, % Effect (TST)	--	Pass	--	Pass or % Effect <50	Pass	Pass
Total Coliform	CFU/100 mL or MPN/100 mL	--	1,000	10,000	--	92,000	92,000
Fecal Coliform	CFU/100 mL or MPN/100 mL	--	200	400	--	4,900	4,900
<i>Enterococcus</i>	CFU/100 mL or MPN/100 mL	--	35	104	--	24,000	24,000
Arsenic, TR	µg/L	--	--	32	--	9.6	9.6
Beryllium, TR	µg/L	--	0.033	--	--	2.3	2.3
Copper, TR	µg/L	--	--	12	--	80	80
Lead, TR	µg/L	--	--	8	--	33	33
Nickel, TR	µg/L	--	--	20	--	120	120
Zinc, TR	µg/L	--	--	80	--	180	180
TCDD Equivalents	µg/L	--	3.9E-09	--	--	1.5E-08	1.5E-08

2.4. Compliance Summary

Monitoring data submitted to the Los Angeles Water Board during the term of Order R4-2013-0172-A01 for the period of December 26, 2013, through September 30, 2023, indicate the following violations of effluent limitations:

Table F-4. Summary of Compliance History

Date	Location	Pollutant	Type of Limitation	Reported Value	Effluent Limitation	Units
03/02/14	EFF-002	<i>Enterococcus</i>	Single Sample Maximum	1,200	104	MPN / 100 mL
03/02/14	EFF-002	<i>Enterococcus</i>	30-Day Average	54.5	35	MPN / 100 mL
06/30/14	EFF-001	Flow	Daily Maximum	0.201	0.18	MGD
09/30/14	EFF-001	Flow	Daily Maximum	0.236	0.18	MGD
12/02/14	EFF-002	TSS	Daily Maximum	220	150	mg/L
12/02/14	EFF-002	Copper	Daily Maximum	31	12	µg/L
12/02/14	EFF-002	Lead	Daily Maximum	8.2	8	µg/L

Date	Location	Pollutant	Type of Limitation	Reported Value	Effluent Limitation	Units
12/02/14	EFF-002	Nickel	Daily Maximum	30	20	µg/L
12/02/14	EFF-002	Zinc	Daily Maximum	270	80	µg/L
12/02/14	EFF-002	Total coliform	Single Sample Maximum	16,000,000	10,000	MPN / 100 mL
12/02/14	EFF-002	Fecal coliform	Single Sample Maximum	90,000	400	MPN / 100 mL
12/02/14	EFF-002	<i>Enterococcus</i>	Single Sample Maximum	24,000	104	MPN / 100 mL
12/02/14	EFF-002	Beryllium	30-Day Average	0.38	0.033	µg/L
12/02/14	EFF-002	TCDD	30-Day Average	1.05E-08	3.9E-09	µg/L
12/02/14	EFF-002	Total coliform	30-Day Average	551,724	1,000	MPN / 100 mL
12/02/14	EFF-002	Fecal coliform	30-Day Average	3,103	200	MPN / 100 mL
12/02/14	EFF-002	<i>Enterococcus</i>	30-Day Average	828	35	MPN / 100 mL
12/31/14	EFF-001	Flow	Daily Maximum	0.264	0.18	MGD
03/31/15	EFF-001	Flow	Daily Maximum	0.242	0.18	MGD
06/30/15	EFF-001	Flow	Daily Maximum	0.193	0.18	MGD
09/30/15	EFF-001	Flow	Daily Maximum	0.213	0.18	MGD
12/03/15	EFF-001	Oil & Grease	Daily Maximum	36	15	mg/L
12/03/15	EFF-001	Oil & Grease	Daily Maximum	60	45	lbs/day
12/31/15	EFF-001	Flow	Daily Maximum	0.203	0.18	MGD
12/31/15	EFF-001	Oil & Grease	30-Day Average	36	10	mg/L
12/31/15	EFF-001	Oil & Grease	30-Day Average	60	30	lbs/day
08/31/17	--	pH, Temperature, and Copper	Deficient Reporting	--	--	--
12/06/18	EFF-002	Total coliform	Single Sample Maximum	241,960	10,000	MPN / 100 mL
12/06/18	EFF-002	Fecal coliform	Single Sample Maximum	13,000	400	MPN / 100 mL
12/06/18	EFF-002	<i>Enterococcus</i>	Single Sample Maximum	58,000	104	MPN / 100 mL
12/06/18	EFF-002	TSS	Daily Maximum	220	150	mg/L
12/06/18	EFF-002	Turbidity	Daily Maximum	230	150	NTU
12/06/18	EFF-002	Copper	Daily Maximum	22	12	µg/L
12/06/18	EFF-002	Lead	Daily Maximum	9.1	8	µg/L
12/06/18	EFF-002	Nickel	Daily Maximum	33	20	µg/L
01/14/19	EFF-002	Total coliform	Single Sample Maximum	92,000	10,000	MPN / 100 mL
01/14/19	EFF-002	Fecal coliform	Single Sample Maximum	4,900	400	MPN / 100 mL
01/14/19	EFF-002	<i>Enterococcus</i>	Single Sample Maximum	24,000	104	MPN / 100 mL

Date	Location	Pollutant	Type of Limitation	Reported Value	Effluent Limitation	Units
01/14/19	EFF-002	Settleable Solids	Instantaneous Maximum	5.5	3.0	ml/L
01/14/19	EFF-002	TSS	Daily Maximum	1,000	150	mg/L
01/14/19	EFF-002	Turbidity	Daily Maximum	650	150	NTU
01/14/19	EFF-002	Copper	Daily Maximum	41	12	µg/L
01/14/19	EFF-002	Lead	Daily Maximum	18	8	µg/L
01/14/19	EFF-002	Nickel	Daily Maximum	79	20	µg/L
01/14/19	EFF-002	Zinc	Daily Maximum	110	80	µg/L
02/02/19	EFF-002	Copper	Daily Maximum	80	12	µg/L
02/02/19	EFF-002	Copper	Daily Maximum	0.317	0.061	lbs/day
02/02/19	EFF-002	Lead	Daily Maximum	33	8	µg/L
02/02/19	EFF-002	Lead	Daily Maximum	0.131	0.04	lbs/day
02/02/19	EFF-002	Nickel	Daily Maximum	120	20	µg/L
02/02/19	EFF-002	Nickel	Daily Maximum	0.476	0.10	lbs/day
02/02/19	EFF-002	Zinc	Daily Maximum	180	80	µg/L
02/02/19	EFF-002	Zinc	Daily Maximum	0.713	0.41	lbs/day
02/28/19	EFF-002	Beryllium	30-Day Average	2.3	0.033	µg/L
02/28/19	EFF-002	Beryllium	30-Day Average	0.000536	0.00017	lbs/day
03/06/19	EFF-002	Copper	Daily Maximum	13	12	µg/L
03/06/19	EFF-002	Nickel	Daily Maximum	23	20	µg/L
03/31/19	EFF-002	Beryllium	30-Day Average	0.35	0.033	µg/L
12/04/19	EFF-002	Copper	Daily Maximum	12	12	µg/L
12/04/19	EFF-002	Zinc	Daily Maximum	86	80	µg/L
12/31/19	EFF-002	Beryllium	30-Day Average	0.16	0.033	µg/L
04/30/20	EFF-002	Beryllium	30-Day Average	0.35	0.033	µg/L
09/13/21	EFF-001	Flow	Daily Maximum	0.366	0.36	MGD
11/08/22	EFF-002	Beryllium	30-Day Average	0.13	0.033	µg/L
11/08/22	EFF-002	Zinc	Daily Maximum	173	80	µg/L
03/15/23	EFF-001	<i>Enterococcus</i>	Single Sample Maximum	130	104	MPN / 100 mL
03/15/23	EFF-002	Total coliform	Single Sample Maximum	17,000	10,000	MPN / 100 mL
03/15/23	EFF-002	Fecal coliform	Single Sample Maximum	2,500	400	MPN / 100 mL
03/15/23	EFF-002	<i>Enterococcus</i>	Single Sample Maximum	5,800	104	MPN / 100 mL

On February 8, 2016, the Los Angeles Water Board issued a Stipulated Order on Settlement Offer No. R4-2016-0038 for effluent limitation violations for the period from 1st Quarter 2014 through the 4th Quarter 2014 in the amount of \$24,000. The effluent violations included indicator bacteria, oil and grease, TSS, beryllium, copper, nickel, and

zinc. On August 9, 2016, the Los Angeles Water Board received the payment of \$24,000 through the “Expedited Payment Program.”

On January 3, 2020, the Los Angeles Water Board issued a Stipulated Order on Settlement Offer No. R4-2019-0110 for effluent limitation violations for the period from 4th Quarter 2018 through the 1st Quarter 2019 in the amount of \$84,000. The effluent violations included indicator bacteria, TSS, settleable solids, turbidity, beryllium, copper, lead, nickel, and zinc. On February 3, 2020, the Los Angeles Water Board received the payment of \$84,000 through the “Expedited Payment Program.”

On January 12, 2022, the Los Angeles Water Board issued a Stipulated Order on Settlement Offer No. R4-2020-0102 for effluent limitation violations for the period from 4th Quarter 2019 through 2nd Quarter 2020 in the amount of \$6,000. The effluent limitation violations included concentrations of beryllium and zinc. On February 1, 2022, the Los Angeles Water Board received the payment of \$6,000 through the “Expedited Payment Program.”

The Los Angeles Water Board has also identified violations for deficient reporting during the 4th Quarter 2017 (several pollutants were not reported). These violations were classified as Class 3 – Minor and not subject to mandatory minimum penalties. Additional violations beginning the 3rd quarter of 2021 to date have been reported by the Discharger. These are pending investigation from Los Angeles Water Board enforcement staff.

To address these exceedances, the Discharger has conducted an evaluation of stormwater runoff and implemented BMPs across the site. The Discharger has removed approximately 80% of the pre-existing scrap metal and old equipment pieces (about 30 tons) from the maintenance and storage yard area. The increased utilization of erosion control BMPs such as biodegradable wattles, erosion netting, tarps, and the installation of additional check dams to assist with slowing the velocity of stormwater runoff and decrease sediment migration and particulate transport prior to discharge. The Discharger has installed road cuts and redirected flow from the access road to vegetated swales and has purchased a specialty street sweeper to remove soil and debris to improve cleaning and enhance maintenance of the permeable paver areas at the site. A gravel cover was installed in the maintenance and storage yard area to decrease the impacts of erosion and migration of exposed sediment. The Discharger continues its efforts to install a planned solar panel farm in the maintenance and storage yard area which will also provide cover for equipment stored in the area.

2.5. Planned Changes

The Discharger does not anticipate any significant changes to the operation at the Facility or the Facility’s treatment of the use of seawater and the discharge of the waste seawater during the permit term of this Order. BMP implementation to address exceedances in stormwater runoff is expected to continue on an ongoing basis.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Table 2 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

However, the Discharger received an exception to the California Ocean Plan to allow discharges from the Facility to the Northwest Santa Catalina Island Areas of Special Biological Significance (ASBS) in 2006. The action of granting the exception was subject to CEQA requirements. The State Water Board, as the lead agency for the CEQA analysis, approved an Initial Study/Mitigated Negative Declaration on February 15, 2006. The State Water Board's Initial Study/Mitigated Negative Declaration concluded that there was no substantial evidence that approval of the exception for the Facility would have significant effect on the environment because mitigation measures were included in the project that would reduce any potential environmental impacts to less than significance. The State Water Board's required terms and conditions for the ASBS exception (i.e. mitigation measures) were incorporated into R4-2013-0172-A01 and are included in this Order.

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. **Water Quality Control Plan.** *The Water Quality Control Plan for the Los Angeles Region* (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. Beneficial uses applicable to Santa Catalina Island Nearshore Zone and the Pacific Ocean Nearshore Zone are as follows:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001, 002	Santa Catalina Island Nearshore Zone (Hydrologic Unit 406.40)	<p>Existing: Navigation (NAV); commercial and sport fishing (COMM); water contact recreation (REC-1); non-contact water recreation (REC 2); marine habitat (MAR); wildlife habitat (WILD) (note a); preservation of biological habitats (BIOL) (note b); rare, threatened, or endangered species (RARE) (note c); migration of aquatic species (MIGR) (note c); and shellfish harvesting (SHELL).</p> <p>Potential: Spawning, reproduction, and/or early development (SPWN).</p>
001, 002	Pacific Ocean Nearshore Zone	<p>Existing: Industrial service supply (IND), NAV, COMM, REC-1, REC-2, MAR, WILD, BIOL, RARE, MIGR, SPWN, and SHELL.</p>
001, 002	Pacific Ocean Offshore Zone	<p>Existing: IND, NAV, COMM, REC-1, REC-2, MAR; WILD; RARE; MIGR; SPWN; and SHELL.</p>

Footnotes for Table F-5

- a. Marine Habitats of Channel Islands and Mugu Lagoon serve as pinniped haul out areas for one or more species (i.e., sea lions)
- b. ASBS for the Northwest Catalina Island area.
- c. One or more species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.

End of Footnotes for Table F-5

3.3.2. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on May 18, 1972, and again on September 18, 1975 (Resolution No. 75-89). The Thermal Plan contains temperature objectives for coastal waters. This Order contains effluent limitations for temperature that are consistent with the Thermal Plan.

3.3.3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972, as amended. The State Water Board adopted the latest amendment on August 7, 2018. This Ocean Plan amendment (1) removed the previously established total coliform objectives, (2) revised the enterococci objective based on the EPA 2012 Recreational objective for marine waters, and (3) retained the previously established fecal coliform objective. This Ocean Plan amendment became effective on February 4, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001, 002	Pacific Ocean Offshore Zone	IND, REC-1 and REC-2 (including aesthetic enjoyment), NAV, COMM; mariculture, ASBS, RARE; MAR, MIGR, SPWN, and SHELL.

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan. This Order implements the Ocean Plan Amendment by removing total coliform effluent limitations, revising the enterococci effluent limitations and retaining the fecal coliform effluent limitations. The Ocean Plan also prohibits discharges of waste into waters designated as ASBS unless an exception is granted by the State Water Board, with concurrence of the United States Environmental Protection Agency (U.S. EPA). (Ocean Plan §§ III.I.2 & III.J.1). The Facility is located adjacent to the Northwest Santa Catalina Island ASBS at Big Fisherman Cove. On July 19, 2006, U.S. EPA provided concurrence in the exception to the Ocean Plan to discharge into the waters of the Northwest Santa Catalina Island ASBS, and on February 15, 2006, the State Water Board adopted Resolution No. 2006-0013 granting the Facility an exception the Ocean Plan subject to certain terms and conditions. This Order implements the terms and conditions in Resolution No. 2006-0013.

- 3.3.4. **Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR section 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by U.S. EPA.
- 3.3.5. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution 68-16 Statement of Policy with Respect to Maintaining High Quality of Waters in California (Resolution 68-16). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Los Angeles Water Board’s Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16 as discussed in Section 4.4.2 of this Fact Sheet.
- 3.3.6. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES

permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order complies with the anti-backsliding provisions as discussed in finding 4.4.1 of this Fact Sheet.

3.3.7. Endangered Species Act Requirements. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 USCA §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.8. Trash Amendments. The State Water Board adopted the “*Amendment to the Ocean Plan and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*” (Trash Amendments) through Resolution No. 2015-0019, which was approved by the Office of Administrative Law (OAL) on December 2, 2015, and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments established a narrative water quality objective and a prohibition on the discharge of trash, to be implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements.

The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Water Board where trash or debris Total Maximum Daily Loads (TMDLs) are in effect prior to the effective date of the Trash Provisions. There are currently no Trash TMDLs for the Pacific Ocean near the discharge therefore the discharges described in this Order are subject to the Trash Amendments. This Order implements the Trash Amendments through the prohibition of trash discharges and also requires the Discharger to develop and implement a Stormwater Management Plan (SWMP), which shall include specific BMPs used as stormwater control measures that the Discharger will undertake to prevent the discharge of trash and other pollutants from the Facility to the Pacific Ocean.

3.4. Impaired Water Bodies on the CWA section 303(d) List

Section 303(d) of the Clean Water Act (CWA) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. Certain receiving waters for Los Angeles watersheds that do not fully support beneficial uses. They have been classified as impaired on the 2020-2022 303(d) list and have been scheduled for TMDL development. The Facility discharges into the Pacific Ocean off of the northern end of Catalina Island.

The State Water Board adopted the 2020-2022 California Integrated Report based on a compilation of the Los Angeles Water Boards’ Integrated Reports. These Integrated Reports contain both the Clean Water Act (CWA) section 305(b) water quality

assessment and section 303(d) list of impaired waters. In developing the Integrated Reports, the Water Boards solicit data, information, and comments from the public and other interested persons. On January 19, 2022, the State Water Board approved the CWA Section 303(d) List portion of the State's 2020-2022 Integrated Report (State Water Board Resolution Number 2022-0006). On May 11, 2022, U.S. EPA approved California's 2020-2022 Integrated Report. The CWA section 303(d) List can be found at the following link:

https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html

The 2020-2022 State Water Board California 303(d) List does not include the classification of the receiving water as impaired in the vicinity of the discharge. The nearest 303(d) listing is for indicator bacteria at Avalon Beach. The Los Angeles Water Board adopted the Avalon Bay Bacteria TMDL as a singular regulatory action, (i.e., the responsible entity is limited to the City of Avalon Wastewater Treatment Facility) through State Water Board Order 2006-003-DWQ and Cease and Desist Order (CDO) No. R4-2012-077. The Facility does not discharge to Avalon Bay and is not subject to the Avalon Bay Bacteria TMDL.

3.5. Other Plans, Policies and Regulations

3.5.1. **Climate Change Adaptation and Mitigation.** On March 07, 2017, the State Water Board adopted a resolution in recognition of the challenges posed by climate change that requires a proactive approach to climate change in all State Water Board actions, including drinking water regulation, water quality protection, and financial assistance (Resolution No. 2017-0012). The resolution lays the foundation for a response to climate change that is integrated into all State Water Board actions, by giving direction to the State Water Board divisions and encouraging coordination with the Los Angeles Water Board. The Los Angeles Water Board also adopted "A Resolution to Prioritize Actions to Adapt and Mitigate the Impacts of Climate Change on the Los Angeles Region's Water Resources and Associated Beneficial Uses" (Resolution No. R18-004) on May 10, 2018. The resolution summarizes the steps taken so far to address the impacts of climate change within the Los Angeles Water Board's programs and lists a series of steps to move forward. These include the identification of potential regulatory adaptation and mitigation measures that could be implemented on a short-term and long-term basis by each of the Los Angeles Water Board's programs to take into account, and assist in mitigating where possible, the effects of climate change on water resources and associated beneficial uses. This Order contains provisions to require planning and actions to address climate change impacts consistent with the guidance and direction in the State and Los Angeles Water Boards' resolutions.

The Permittee is required to develop a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) and submit the Climate Change Plan no later than **12 months** after the effective date of this Order. The Climate Change Plan must include an assessment of short- and long-term vulnerabilities of the Facility and operations as well as plans to address any Facility vulnerabilities, treatment systems, and outfalls for predicted impacts to

ensure that facility operations are not disrupted, compliance with permit conditions is achieved, and receiving waters are not adversely impacted by discharges.

- 3.5.2. **Environmental Justice and Advancing Racial Equity.** Water Code section 13149.2 requires the Los Angeles Water Board to make a finding on potential environmental justice, tribal impact, and racial equity considerations when issuing or reissuing individual waste discharge requirements or waivers of waste discharge requirements that regulate activity or a facility that may impact a disadvantaged or tribal community, and that includes a time schedule in accordance with subdivision (c) of Section 13263 for achieving an applicable water quality objective, an alternative compliance path that allows time to come into compliance with water quality objectives, or a water quality variance, the Los Angeles Water Board shall make a finding on potential environmental justice, tribal impact, and racial equity considerations. Water Code section 189.7 requires the Los Angeles Water Board to conduct outreach in affected disadvantaged and/or tribal communities. The Los Angeles Water Board is also committed to developing and implementing policies and programs to advance racial equity and environmental justice so that race can no longer be used to predict life outcomes, and outcomes for all groups are improved.

This Order does not include a time schedule, alternative compliance path, or variance. Therefore, Water Code section 13149.2 does not apply to this permit reissuance.

The Facility is located at Big Fisherman Cove and is on the northern end of Santa Catalina Island, Los Angeles County, California. The population of the area in the vicinity of the Facility are only support personnel for the research institution and the area does not meet the criteria of a disadvantaged community as defined in Water Code section 189.7(d)(1). However, the discharge may impact tribal communities. The Los Angeles Water Board has therefore conducted outreach consistent with Water Code section 189.7 by reaching out to tribal communities about this Order. The Los Angeles Water Board reviewed readily available information and any information raised to the Board by interested persons concerning anticipated water quality impacts resulting from adoption of this Order. Additionally, the Board has considered any environmental justice concerns within the Board's authority and by any interested persons regarding those impacts.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The Discharger operates a marine research and educational facility. The pollutants of concern for discharges covered in this Order were identified based on constituents regulated in the previous Order (Order No. R4-2013-0172-A01) and are based on constituents that are regulated in the Ocean Plan. Contributing waste streams include waste marine seawater discharges from aquaria that contain aquatic animals and stormwater runoff from non-process areas (buildings, roads and service areas). Waste feed and waste products from marine animals can contribute solids, turbidity, BOD, and ammonia to the discharge. In addition, metabolic wastes from marine animals may potentially alter the pH and dissolved oxygen of the discharge. Effluent monitoring data from the term of the previous permit included detected concentrations of ammonia, metals, chlorine, and bacteria. The previous permit contains effluent limits for oil and grease; thus this parameter remains a pollutant of concern in the waste seawater discharge. Solids and oil and grease are typical pollutants found in storm water discharges from industrial facilities. Effluent monitoring resulted in detected concentrations of metals, settleable and suspended solids, TCDDs equivalents, and bacteria; therefore, these constituents are pollutants of concern. These pollutants were regulated in Order R4-2013-0172-A01 and are carried over in this Order.

4.1. Discharge Prohibitions

Discharge Prohibitions in this Order are based on the federal CWA, the Code of Federal Regulations (CFR), the Basin Plan, the Water Code, the Ocean Plan and other applicable State Water Board plans and policies, U.S. EPA guidance and regulations, and previous permit provisions. The discharge prohibitions included in this Order are consistent with the requirements set for other ocean discharges that are regulated by NPDES permits and the State Water Board Resolution No. 2006-0013.

4.2. Technology-based Effluent Limitations

4.2.1. Scope and Authority.

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3(c), (d).

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Los Angeles Water Board must consider specific factors outlined in 40 CFR section 125.3.

4.2.2. **Applicable Technology-Based Effluent Limitations**

The ELG for the Concentrated Aquatic Animal Production (CAAP) Point Source Category, established by U.S. EPA, became effective on September 22, 2004. These regulations, provided in 40 CFR section 451 are applicable to CAAP facilities, as defined in section 122.24, that use flow-through, recirculating, or net pen systems and meet certain annual production thresholds, which are facilities that produce 100,000 pounds or more of aquatic animals per year (fish, molluscs, and crustaceans). Based on the type of operation at the Facility for research purposes and not for production, the Facility is not categorized as a CAAP facility. Therefore, the CAAP ELGs provided in 40 CFR section 451 are not applicable to the Facility.

This Order carries over technology-based effluent limitations for BOD, TSS, oil and grease, and turbidity based on BPJ in accordance with 40 CFR section 125.3. Table 4 of the Ocean Plan also contains technology-based effluent limitations for oil and grease, total settleable solids, turbidity, and pH. The more stringent of the applicable technology-based effluent limitation is implemented in this Order. 40 CFR § 122.45(d) requires the Facility to have final effluent limitations expressed as both average monthly and maximum daily, unless impracticable.

A summary of the technology-based effluent limitations contained are shown in Table F-7.

Table F-7. Applicable Technology-Based Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Notes
BOD 5-day @ 20°C	mg/L	20	--	60	--	--
Oil and Grease	mg/L	10	--	15	--	--
pH	S.U.	--	--	--	6.0 – 9.0	a
Settleable Solids	ml/L	1.0	1.5	--	3.0	--
TSS	mg/L	50	--	150	--	--
Turbidity	NTU	50	100	150	225	--

The technology-based effluent limitations contained in Order No. R4-2013-0172-A01 were applied to discharges of waste seawater, and these effluent limitations are carried over and are applicable to Discharge Point 001 for waste seawater discharge. Since the discharge of the stormwater is not continuous, and occurs infrequently, only the daily and instantaneous maximum effluent limitations in the above table are also applicable at Discharge Point 002.

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority.

CWA Section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state’s narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi). WQBELs must also be consistent with the assumptions and requirements of TMDL Waste Load Allocations (WLAs).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the Ocean Plan.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan establish the beneficial uses and WQOs for ocean waters of the State. The beneficial uses for the receiving water affected

by the discharges have been previously described in section 3.3.1. and section 3.3.3 of this Fact Sheet. The Basin Plan and Ocean Plan include both narrative and numeric water quality objectives applicable to the receiving water. The WQOs from the Ocean Plan and Basin Plan were incorporated into this Order as either final effluent limitations (based on reasonable potential) or receiving water limitations.

4.3.3. **Expression of WQBELs**

Pursuant to 40 CFR § 122.45(d) for continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as maximum daily and average monthly discharge limitations.

The WQBELs for marine aquatic life toxics contained in this Order are based on Table 3 WQOs contained in the 2019 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. This Order applies the six-month median water quality objectives for marine aquatic life toxics in the 2019 Ocean Plan as monthly average limitations for those pollutants that previously had average monthly limitations and continue to have reasonable potential to cause or contribute to exceedances of water quality objectives. In addition, the 2019 Ocean Plan specifies that for the six-month median for intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. To be consistent with the 2019 Ocean Plan, maximum daily and instantaneous maximum limitations are also prescribed in this Order.

Pursuant to 40 CFR § 122.45(e)(1) for non-continuous discharges, effluent limitations, standards, shall be particularly described and limited, considering the frequency of the discharge. In 2008, the Discharger segregated stormwater and non-stormwater discharges that were previously commingled, through two separate pipes, located adjacent to each other. R4-2013-0172-A01 applied effluent limitations consistent with the discharges from the previous order for the commingled sources. Stormwater runoff from Facility occurs only during rain events, therefore it is impracticable to include 30-day average objectives for many pollutants. This Order applies only daily and instantaneous maximum effluent limitation for stormwater discharges at Discharge Point 002.

4.3.4. **Determining the Need for WQBELs**

Order No. R4-2013-0172-A01 contained effluent limitations for non-conventional and toxic pollutants parameters in Table 3 of the 2019 Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in the Ocean Plan was evaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in Appendix VI of the 2019 Ocean Plan. This statistical RPA method (using RPAcalc version 2.2) accounts for averaging period of the WQO, accounts for and captures long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific data. It combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a

limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probable initial dilution), can then be compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have an insufficient number of monitoring data or a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. The 2019 Ocean Plan requires that the existing effluent limitations for these constituents be retained in the new Order, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a WQO.

According to the 2019 Ocean Plan, the RPA can yield three endpoints:

Endpoint 1: An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in Appendix III, is required.

Endpoint 2: An effluent limitation is not required for the pollutant. Appendix III effluent monitoring is not required for the pollutant; the Regional Board, however, may require occasional monitoring for the pollutant or for whole effluent toxicity as appropriate.

Endpoint 3: The RPA is inconclusive. Monitoring for the pollutant or whole effluent toxicity testing, consistent with the monitoring frequency in Appendix III, is required. An existing effluent limitation for the pollutant shall remain in the permit, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if the monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a Table 3 water quality objective.

For Discharger Points 001 and 002, all effluent data submitted to the Los Angeles Water Board for the period from January 2018 through September 2023 were considered to evaluate reasonable potential in accordance with the procedures contained in the 2019 Ocean Plan.

For Discharge Point 001, ammonia, antimony, beryllium, chlorine (total residual), chromium (total), silver, thallium, TCDD equivalents, and bis(2-ethylhexyl) phthalate were either not detected or were below the water quality objective and resulted in Endpoint 3; and whereas arsenic, cadmium, copper, lead, mercury, nickel, selenium, zinc, halomethanes resulted in Endpoint 2, as defined in the 2019 Ocean Plan. For Discharge Point 002, ammonia, cadmium, chlorine (total residual), chromium (total), mercury, selenium, and thallium were either not detected or were below the water quality objective and resulted in Endpoint 3. Since the previous permit did not include effluent limits for these pollutants and this order includes a reopener clause, no effluent limitations were included in this Order for these pollutants.

Since copper at Discharge Point 001 resulted in Endpoint 2, the final effluent limitation for copper at Discharge Point 001 is removed. The final effluent limitations for arsenic, beryllium, copper, lead, nickel, zinc and TCDD equivalents at Discharge Point 002 were also carried over from the previous permit. Review of the data indicated that the concentration of these pollutants (except TCDD equivalents) were greater than their Ocean Plan water quality objectives. When performing the RP calc for TCDD equivalents, the data indicated Endpoint 3, i.e. that the RPA was inconclusive. However, TCDD equivalent is carried over to this Order because the Ocean Plan states that when the RPA results in Endpoint 3 that an existing effluent limitation for the pollutant shall remain in the permit. The Order No. R4-2013-0172-A01 contained beryllium and TCDD equivalents limitations as the average monthly effluent limitations (AMEL). This Order replaces the AMEL for beryllium and TCDD equivalents with the Maximum Daily Effluent Limitations (MDEL) at Discharge Point 002 based on the segregation of stormwater discharges from the Facility. Pursuant to 40 CFR section 122.45(d), permit limitations for continuous discharges shall be expressed, unless impracticable, as both AMELs and MDELs. Discharges at Discharge Point 002 from the Facility are intermittent, comprised of storm water only, and of short duration; therefore, AMELs are not applicable for this discharge. The replacement of the AMEL with MDEL for beryllium and TCDD equivalents is a more stringent approach because MDEL does not provide any average of results and applies the maximum value itself while AMEL averages the maximum value with other lower values collected within that month, if any, which could lower the reporting values. As such, the TCDD equivalents effluent limitation for Discharge Point 002 is carried over consistent with the Ocean Plan.

Los Angeles Water Board staff utilized RPCalc to calculate reasonable potential using the procedure described above. The analysis included effluent data provided by the Discharger from January 2018 to September 2023 for Discharge Points 001 and 002. Los Angeles Water Board staff determined that there were no new constituents that demonstrated reasonable potential to exceed 2019 Ocean Plan water quality objectives.

For those constituents that have no reasonable potential to cause, or contribute to excursions of water quality objectives including narrative objectives, no numeric effluent limitations are prescribed. The Discharger is required to monitor for these constituents to gather data for use in RPAs for future Order renewals and/or updates.

4.3.5. **WQBEL Calculations**

From the Table 3 water quality objectives of the Ocean Plan, effluent limitations are calculated according to Equation 1 of the Ocean Plan for all pollutants, except for acute toxicity (if applicable) and radioactivity:

$$C_e = C_o + Dm(C_o - C_s)$$

Where:

C_e = the effluent limitation ($\mu\text{g/L}$)

C_o = the water quality objective to be met at the completion of initial dilution ($\mu\text{g/L}$)

C_s = background seawater concentration ($\mu\text{g/L}$)

D_m = minimum probable initial dilution expressed as parts seawater per part wastewater.

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

The D_m is based on observed waste flow characteristics, receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. No dilution factor has been granted to the Facility; therefore the minimum probable initial dilution is zero (0).

As stated above, the water quality objective to be met at the completion of initial dilution is contained in Table 3 of the Ocean Plan.

Table F-8. Background Seawater Concentrations

Parameter	Background Seawater Concentrations (C_s)($\mu\text{g/L}$)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8

The effluent data collected between January 2018 and September 2023 used for R_Pcalc indicated that copper would have a potential to an exceedance of seawater water quality objectives at Discharge Point 002 only. Therefore, using the equation $C_e = C_o + D_m (C_o - C_s)$, the effluent limitation for copper at Discharge Point 002 is calculated as following f, with a dilution ration (D_m) of zero for copper.

Copper

$$C_e = 12 \mu\text{g/L} + 0 (12.0 \mu\text{g/L} - 2.0 \mu\text{g/L}) = 12 \mu\text{g/L} \text{ (Daily Maximum)}$$

Based on the procedures described above, effluent limitation have been calculated for all Table 3 pollutants (excluding radioactivity and chronic toxicity) from the 2019 Ocean Plan that have reasonable potential to cause, or contribute to an excursion above WQOs, and the calculated effluent limitations are incorporated into this Order when applicable.

4.3.6. Bacteria Limitations

The State Water Board established standards to protect water contact recreation in coastal waters from bacterial contamination and are a required part of this Order. Unless specifically excepted by this Order, the discharge, by itself or jointly with any other discharge(s), shall not cause violations of the following water quality objectives. Compliance with these objectives shall be determined

by samples collected at stations representative of the area within the spray field where initial dilution is completed (i.e., outside the zone of initial dilution).

a. Water-Contact Standards.

Subsection (i) of this section contains bacteria water quality objectives adopted by the State Water Board for ocean waters used for water contact recreation. Subsection (ii) describes the beach notification levels for waters adjacent to public beaches and public water contact sports areas in ocean waters.

i. State Water Board Water-Contact Objectives

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Los Angeles Water Board (i.e., waters designated as REC-1), but including all kelp beds, the following water quality objectives shall be maintained throughout the water column.

Fecal coliform

A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.

Fecal Coliform REC-1 WQO for Water-Contact in Ocean Waters

Indicator	30-day Geometric Mean	Single Sample Maximum
Fecal Coliform	200 per 100 mL	400 per 100 mL

Enterococci

A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.

Enterococci REC-1 WQO for Water-Contact in Ocean Waters*

Indicator	Geometric Mean	Statistical Threshold Value
Enterococci	30	110

* The waterbody GM shall not be greater than the GM magnitude in any six-week interval, calculated weekly. The STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

ii. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall

pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

4.3.7. Whole Effluent Toxicity (WET)

WET protects the receiving water quality from the aggregate toxic effect of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Ocean Plan specifies the application of chronic and acute toxicity requirements based on the minimum initial dilution factor for ocean discharges. Consistent with the Ocean Plan, dischargers are only required to conduct chronic toxicity monitoring with minimum initial dilution factors below 100:1 at the edge of the mixing zone. The minimum initial dilution (Dm) for Discharge Point 001 and Discharge Point 002 is zero.

The 2019 Ocean Plan establishes a daily maximum chronic toxicity objective of $1.0 \text{ TUc} = 100/(\text{No Observed Effect Concentration (NOEC)})$ using a 5-concentration hypothesis test, and a daily maximum acute toxicity objective of $0.3 \text{ TUa} = 100/\text{LC50}$ using a point estimate model. This Order evaluates chronic toxicity using the Test of Significant Toxicity (TST) hypothesis testing statistical approach. This statistical approach is consistent with the 2019 Ocean Plan in that it provides the maximum protection to the environment, since it more reliably identifies acute and chronic toxicity than the current NOEC hypothesis-testing approach (See California Ocean Plan, Section III.F and Appendix I).

For this Order, chronic toxicity in the discharge is evaluated using a maximum daily effluent limitations that utilizes U.S. EPA’s 2010 TST hypothesis testing approach. The chronic toxicity effluent limitations are expressed as “Pass” for each maximum daily individual result.

In January 2010, USEPA published a guidance document titled EPA Regions 8, 9 and 10 Toxicity Training Tool, which among other things discusses permit limit expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR § 122.45(d) require that all permit limits be expressed, unless impracticable, as an Average Weekly Effluent Limitation (AWEL) and an Average Monthly Effluent Limitation (AMEL). Following Section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL is not appropriate for WET. In lieu of an AMEL, U.S. EPA recommends establishing a MDEL for toxic pollutants and pollutants in water quality permitting, including WET. For an ocean discharge, this is appropriate because the 2019 Ocean Plan only requires a MDEL and does not include AMELs or AWELs for chronic toxicity (See 2019 California Ocean Plan, section II.D.7.).

The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AMEL is the

highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month. In June 2010, U.S. EPA published a guidance document titled National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (U.S. EPA 833-R-10-003, June 2010), in which they recommend the following: “*Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program.*” The TST statistical approach is another statistical option for analyzing valid WET test data. Use of the TST statistical approach does not result in any changes to U.S. EPA’s WET test methods. Section 9.4.1.2 of U.S. EPA’s *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (U.S. EPA/600/R-95- 136), recognizes that, “the statistical methods recommended in this manual are not the only possible methods of statistical analysis.” The TST statistical approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine WET test methods.

Results obtained from the chronic toxicity test are analyzed using the TST statistical approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting “Pass”. Chronic toxicity results are expressed as “Pass” or “Fail” and “% Effect”. During a calendar month, exactly three independent toxicity tests are required when one toxicity test results in “Fail”. Since no dilution is allowed, the chronic toxicity IWC is 100 percent effluent. Consistent with the Ocean Plan the Los Angeles Water Board included chronic toxicity effluent limitations and monitoring requirements. According to the reported toxicity testing results, collected from January 2018 to September 2023, all chronic toxicity results at Discharge Points 001 are reported as “Pass.” Thus, this Order removes the chronic toxicity limitations at Discharge Point 001, but the toxicity monitoring requirements with analysis using the TST statistical method is retained.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All existing effluent limitations are carried over, except the removal of copper and chronic toxicity effluent limitations at Discharge Point 001, the revision of the AMEL for beryllium and TCDD equivalents at Discharge Point 002, and the removal total coliform effluent limitations at Discharge Points 001 and 002 and the revision of enterococcus maximum daily limit. The changes to these limits are consistent with the antibacksliding provisions as described below.

Removal of Chronic Toxicity and Copper Effluent Limits at Discharge Point 001

CWA section 303(d)(4)(B) allows relaxation of effluent limitations where the quality of the receiving water equals or exceeds the levels necessary to protect the designated uses of the water or otherwise required by applicable water quality standards, if the revision is subject to and consistent with the State's Antidegradation Policy. The 2020-2022 State Water Board California 303(d) List does not include the classification of the receiving water as impaired in the vicinity of the discharge. The receiving water is in attainment for copper and toxicity as the nearest 303(d) listing is for indicator bacteria at Avalon Beach. The monitoring data, collected from January 2018 to August 2023, for Discharge Point 001 shows that the effluent copper concentration ranged from 0.03 to 0.72 ug/l which were five to 100 times lower than the most stringent copper WQOs in the Ocean Plan. The monitoring data also shows that the effluent chronic toxicity testing results are reported all "pass," which indicates that the waste discharges from the Facility has no toxic effects to the receiving water.

The monitoring requirements for chronic toxicity and copper in effluent and receiving water are remained. As described below, removal of effluent limitations for copper and chronic toxicity is consistent with the state and federal antidegradation policies. Therefore, the exception to the prohibition on relaxation of effluent limitations found in CWA section 303(d)(4)(B) allows the removal of the effluent limitations for copper and chronic toxicity at Discharger Point 001.

Revisions to effluent limitations for Bacterial Indicators at Discharge Points 001 and 002

Order No. R4-2013-0172-A01 also contained effluent imitations for total coliform and enterococcus. These limitations were based on the 2015 Ocean Plan. The 2019 Ocean Plan does not include water quality objectives for total coliform and revises enterococcus water quality objectives, and this Order removes the effluent limitations for total coliform at Discharge Points 001 & 002 and revises enterococcus effluent limitations based on the most recent Ocean Plan.

CWA section 303(d)(4)(B) authorizes for pollutants in attainment with applicable water quality standards to be relaxed as long as relaxation complies with antidegradation requirements. Here, the receiving water is in attainment for all parameters, including bacterial indicators. The changes to WQBELs for total coliform and enterococcus are not expected to result in degradation because the changes to these objectives are updated based on new science implementing on U.S. EPA's 2012 Recreational Criteria) as well as epidemiological studies conducted at southern California beaches. Total coliform was determined to be an outdated parameter that was not well linked to illness while recreating in Ocean Waters according to both U.S. EPA and California-specific epidemiology studies. (Staff Report for Bacteria Provisions, p. 62). The enterococcus WQBEL objective was updated to reflect the State Water Board's changes to the applicable water quality objective to match the U.S. EPA's 2012 Recreational Water Quality Criteria based on an illness rate of 32 per 1,000 primary contact recreators. The updates to the enterococcus water quality objective to better reflect risk protection level necessary to protect public health and are based on the more conservative of the two illness rates recommended by U.S. EPA. (Id. at p. 8.) Further, the Order retains the existing fecal coliform WQBELs as no

changes were made to the fecal coliform water quality objective in the Ocean Plan because the State Water Board determined that it better reflected illness rate than enterococcus in some exposure scenarios and should be retained as is. (Id. at 62-63.) As such, no degradation is expected to occur as a result of the changes to the Enterococcus WQBEL. Therefore, removal of the total coliform effluent limitations and revision of the enterococcus WQBELs is consistent with the exception to the prohibition on relaxation of effluent limitations found in CWA section 303(d)(4)(B).

Furthermore, the accompanying monitoring and reporting program requires continued data collection, and if monitoring data show reasonable potential for any of the above constituents to cause or contribute to an exceedance of water quality standards, the Order will be reopened to establish WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform with antidegradation policies and anti-backsliding provisions.

4.4.2. Antidegradation Policies

40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. On October 28, 1968, the State Water Board established California's antidegradation policy when it adopted Resolution Number 68-16, Statement of Policy with Respect to Maintaining the Quality of the Waters of the State (Resolution 68-16). Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. This Order's requirements for the discharge points are consistent with the Ocean Plan, except for the exemption allowed as in Resolution No. 2006-0013.

The Ocean Plan, Section III.E.4., Implementation Provisions for Marine Managed Areas for SWQPA- ASBS, includes a prohibition of the discharge of waste to areas designated as being of special biological significance. The section stipulates that "Discharges shall be located a sufficient distance from such areas to assure maintenance of natural water quality conditions in these areas." Activities in these areas must not permanently degrade water quality or result in water quality lower than that necessary to protect existing uses.

The Facility discharges waste seawater from the aquaria operations and storm water runoff to the ASBS located adjacent nearshore zone of the Pacific Ocean, Northwest Santa Catalina Island. The Facility was created in 1965 and discharges have emanated from the Facility since that time. The State Water Board adopted Resolution No. 2006-0013 approving a conditional exception to the Ocean Plan prohibition after reviewing data submitted by the facility, an analysis of the discharges and flows from the Facility. This resolution covers all discharges from the Facility into the ASBS, including all seawater point source discharges, stormwater discharges, and nonpoint source discharges. The resolution also includes stipulations designated to ensure that the quality of the receiving water is not adversely impacted by the discharges generated at the Facility in violation of Resolution 68-16.

The renewal of this NPDES permit is consistent with Resolution 68-16 because it is not expected to allow degradation of receiving water quality. The permitted discharge is not a new discharge, and this Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final limitations in this Order, which include concentration-based and mass-based limitations, hold the Discharger to performance levels that will not cause or contribute to water quality impairment or degradation of water quality.

The changes to the Order to remove effluent limitations for total coliform effluent limitations and revision of enterococcus MDEL at Discharge Points 001 & 002 will not authorize degradation because the changes to the effluent limitations are consistent with Ocean Plan and are protective of beneficial uses in receiving water. As discussed in sections 3.3.3 and 4.4.1, the Ocean Plan Amendments adopted in 2019 updated the water quality standards for bacterial indicators to remove total coliform as an indicator for marine waters because total coliform does not correlate to human health impacts protected by the REC-1 beneficial use. As such, the level of total coliform in the effluent or the receiving water is not an indicator of impacts to water quality from the discharge and/or potential risk of degradation. Moreover, to the extent the concern is degradation to the REC-1 use from bacterial indications, this Order continues to include fecal and enterococcus effluent limitations for bacteria indicators. The relaxation of the MDEL for enterococcus will not cause degradation because this number is based on an alternative way to calculate health risk that is still equally protective of beneficial uses. Additionally, no change has been made to the effluent limitations for Fecal coliform.

Additionally, the removal of the effluent limitation for copper and chronic toxicity at Discharge Point 001 will not authorize degradation because the removal of the effluent limitations are consistent with the Ocean Plan. As discussed in Section 4.3.4 and 4.4.1, the RPA for copper and chronic toxicity resulted in effluent limitations are not required for this pollutant. The relaxation of the effluent limitations for copper and chronic toxicity at Discharge Point 001 is not expected to cause degradation of the receiving water.

This Order does not authorize changes to the Facility's operations that are expected to change the volume or character of the discharge in a manner that may result in degradation to water quality. An analysis of the monitoring data for chronic toxicity and copper under the prior permit, shows that there is no indication that the discharge is causing or contributing exceedances of the chronic toxicity effluent limitation and effluent limitation for copper at Discharge Point 001. There is a rigorous monitoring program in place in this Order to ensure that any discharges will not degrade any historical or existing receiving water quality for bacterial indicators and/or chronic toxicity, and copper. Therefore, the permitted discharge is consistent with 40 CFR section 131.12, the antidegradation provision, and Resolution 68-16.

4.4.3. Mass-Based Effluent Limitations

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 CFR 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment. This Order includes mass-based effluent limitations, where appropriate, to comply with Section 122.45(f)(1).

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

Where:

$$\text{Mass} = \text{mass limitation for a pollutant (lbs/day)}$$

$$\text{Effluent limitation} = \text{concentration limit for a pollutant (mg/L)}$$

$$\text{Flow rate} = \text{discharge flow rate (MGD)}$$

Mass-based effluent limitations applicable to Discharge Point 001 for waste seawater and Discharge Point 002 for stormwater discharges are based on a maximum flow of 0.360 MGD and 0.610 MGD, respectively, for the Facility.

4.4.4. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, oil and grease, TSS, and settleable solids. Restrictions on these pollutants are discussed in section 4.2.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual water quality-based effluent limitations are based on the 2019 Ocean Plan. All beneficial uses and water quality objectives contained in the Basin Plan and Ocean Plan were approved under State law and approved by U.S. EPA. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA and applicable water quality standards. The following tables include a summary of the final effluent limitations included in this Order for Discharge Point 001 and Discharge Point 002.

Table F-9. Summary of Final Effluent Limitations for Discharge Point 001

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Basis	Notes
BOD 5-day @ 20°C	mg/L	20	--	60	--	E	--
BOD 5-day @ 20°C	lbs/day	60	--	180	--	E	a
Oil and Grease	mg/L	10	--	15	--	E	--
Oil and Grease	lbs/day	30	--	45	--	E	a
pH	S.U.	--	--	--	6.0 – 9.0	E, OP	b
Settleable Solids	ml/L	1.0	1.5	--	3.0	E, OP	--
TSS	mg/L	50	--	150	--	E	--
TSS	lbs/day	150	--	450	--	E	a
Turbidity	NTU	50	100	150	225	E, OP	--
Temperature	°F	--	--	--	86	E, TP	c
Fecal Coliform	CFU /100 mL or MPN /100 mL	200	--	400	--	OP	d
<i>Enterococcus</i>	CFU /100 mL or MPN /100 mL	30	--	110	--	OP	e

Footnotes for Table F-9

BP: Basin Plan

E: Existing Requirement (Order R4-2013-0172-A01)

OP: Ocean Plan

TP: Thermal Plan

TST: Test of Significant Toxicity

- a. The mass-based effluent limitations are calculated using the maximum flow of 0.360 million gallons per day (MGD) for Discharge Point 001, as follows:

$$\text{Mass (lbs/day)} = \text{Flow (MGD)} * 8.34 * \text{concentration (mg/L)}.$$

- b. The effluent limitations of pH are 6.0 as an Instantaneous Minimum and 9.0 as an Instantaneous Maximum. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
- c. The effluent limitation for temperature is 86°F as an Instantaneous Maximum.
- d. A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.
- e. A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month,

calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.

End of Footnotes for Table F-9

Table F-10. Summary of Final Effluent Limitations for Discharge Point 002

Parameter	Units	Maximum Daily	Instantaneous Maximum	Basis	Notes
BOD 5-day @ 20°C	mg/L	60	--	E	--
BOD 5-day @ 20°C	lbs/day	305	--	E	a
Oil and Grease	mg/L	15	--	E, OP	--
Oil and Grease	lbs/day	76	--	E, OP	a
pH	S.U.	--	6.0 – 9.0	E, OP	b
Settleable Solids	ml/L	--	3.0	E, OP	--
TSS	mg/L	150	--	E	--
TSS	lbs/day	760	--	E	a
Turbidity	NTU	150	--	E, OP	--
Temperature	(°F)	--	86	E	c
Chronic Toxicity	Pass or Fail, % Effect	Pass or % Effect <50	--	TST	d
Fecal Coliform	CFU /100 mL or MPN /100mL	200	400	OP	e
<i>Enterococcus</i>	CFU /100 mL or MPN /100mL	30	110	OP	f
Arsenic, TR	µg/L	32	--	OP	--
Arsenic, TR	lbs/day	0.16	--	OP	a
Beryllium, TR	µg/L	0.033	--	OP	--
Beryllium, TR	lbs/day	0.00017	--	OP	a
Copper, TR	µg/L	12	--	OP	--
Copper, TR	lbs/day	0.061	--	OP	a
Lead, TR	µg/L	8	--	OP	--
Lead, TR	lbs/day	0.04	--	OP	a
Nickel, TR	µg/L	20	--	OP	--
Nickel, TR	lbs/day	0.10	--	OP	a
Zinc, TR	µg/L	80	--	OP	--
Zinc, TR	lbs/day	0.41	--	OP	a
TCDD Equivalents	µg/L	3.9E-09	--	OP	--
TCDD Equivalents	lbs/day	2.0E-11	--	OP	a and g

Footnotes for Table F-10

BP: Basin Plan

OP: Ocean Plan

TST: Test of Significant Toxicity

E: Existing Requirement (Order R4-2013-0172-A01)

TP: Thermal Plan

- a. The mass-based effluent limitations are calculated using the maximum flow of 0.61 million gallons per day (MGD) for Discharge Point 002, as follows:

$$\text{Mass (lbs/day)} = \text{Flow (MGD)} * 8.34 * \text{concentration (mg/L)}.$$

- b. The effluent limitations of pH are 6.0 as an Instantaneous Minimum and 9.0 as an Instantaneous Maximum. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
- c. The effluent limitation for temperature is 86°F as an Instantaneous Maximum.
- d. The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”.
- e. A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.
- f. A six-week rolling GM of enterococci not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. U.S. EPA recommends using U.S. EPA Method 1600 or other equivalent method to measure culturable enterococci.
- g. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners. The TCDD Equivalents are calculated as follows: Dioxin-TEQ (TCDD equivalents) = Sum of Concentration of dioxin or furan congener_x (C_x) x Toxicity Equivalency Factors (TEFs) for congener_x. The TEFs are listed in the Table below.

Toxicity Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0003
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.03
2,3,4,7,8 - penta CDF	50	0.3
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0003

End of Footnotes for Table F-10

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications – Not Applicable

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

The Ocean Plan and Basin Plan contains numeric and narrative water quality objectives applicable to the coastal waters of California. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 CFR section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water.

5.2. Groundwater – Not Applicable

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.2. Special Provisions

6.2.1. Reopener Provisions

These provisions are based on 40 CFR part 123. The Los Angeles Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Los Angeles Water Board, including revisions to the Basin Plan and/or Ocean Plan.

6.2.2. Special Studies and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation Workplan

This provision is based on section III.C.10 of the Ocean Plan.

b. Benthic Marine Life Survey

Condition 2.j. of Resolution No. 2006-0013 requires *“that at least once every permit cycle (every five years), a quantitative survey of benthic marine life must be performed near the discharge and at a reference site. The Los Angeles Water Board, in consultation with the State Water Board’s Division of Water Quality, must approve the survey design. The results of the survey must be completed and submitted to the Los Angeles Water Board within six months before the end of the permit cycle (permit expiration).”* This Order incorporates the requirements of condition 2.j as special provision V.C.2.b.

During the last permit cycle, the Discharger fulfilled this requirement by participation in the Bight '18 2022 Rocky Intertidal Study in lieu of conducting a benthic marine life survey. The consensus of the Bight '18 stakeholder and regulatory work group has identified the Rocky Intertidal Biology as an important indicator of near shore water quality and the benefit of participation in this element of the Bight '18 regional study provides better leverage of information than would be gathered by a site specific Benthic Marine Life Survey. The Discharger may continue to participate in the next regional monitoring program in lieu of conducting its own marine life survey and in coordination with the Regional ASBS Monitoring as identified below (Section 6.3.2.d).

c. Metals Bioaccumulation Study

Condition 2.k of Resolution No. 2006-0013 specifies: *“Once during the upcoming permit cycle, a bioaccumulation study using mussels (Mytilus californianus) must be conducted to determine the concentrations of metals near field (within Big Fisherman Cove) and far field (at the reference station). The Los Angeles Water Board, in consultation with the Division of Water Quality, must approve the study design. The results of the survey must be completed and submitted to the Los Angeles Water Board at least six months prior to the end of the permit cycle (permit expiration). Based on the study results, the Los Angeles Water Board, in consultation with the Division of Water Quality, may adjust the study design in subsequent permits, or add additional test organisms”*. This Order incorporates the requirements of condition 2.k as special provision V.C.2.c.

As required in Order No. R4-2013-0172-A01, the Discharger conducted the Metals Bioaccumulation Study in April and June of 2017 at four station locations. The two surveys documented a severe depletion of mussels primarily attributed to above normal ocean temperatures in the El Niño year. Based on the lack of available mussels, the Discharger requested a waiver of the bioaccumulation study on June 6, 2017. The waiver was granted by the Los Angeles Waterboard on August 8, 2017, with a stipulation that should the survey in the fall of 2018 show adequate and optimally sized mussel availability, the Metals Bioaccumulation Study would be resumed the following year. On November 6, 2018, the Discharger submitted a final report to the Los Angeles Water Board to report on the mussel survey performed on October 17, 2018. The results indicated the following:

- i. Due to the ongoing El Niño (2018), there were significantly fewer mussels than were observed during the 2017 surveys. No mussels were found in Big Fisherman Cove in the June 2017 surveys and this continued in the October 2018 survey. Only one *M. californianus* was found in the rock outcroppings in the Goat Harbor area in the June 2017 survey and none were found during the 2018 survey.
- ii. In the Isthmus Cove area, on the mooring lines under the Two Harbors fueling pier, a larger and more abundant number of different mussels was observed, *M. galloprovincialis*, indicating growth in size and number at this location.
- iii. The survey of the NOAA Mussel Watch program SCBR site showed significant die back of mussels since the 2017 surveys for both size and numbers of mussels. The SCBR survey area contains the largest mussel beds in the vicinity of the Isthmus. No mussels for this study have or would be collected from the NOAA S&T SCBR survey location in order to maintain the integrity of this long term monitoring site. Thus, the results from the 2018 survey, indicating inadequate availability of mussels, fulfilled the waiver stipulation.

Due to the lack of available mussels from the 2017 and 2018 surveys, the Los Angeles Water Board is requiring an additional survey be completed under this Order for the permit term. Therefore, the Discharger must conduct a bioaccumulation study using mussels *M. californianus* to determine the concentration of metals near field (within Big Fisherman Cove) and far field (at the reference station). The results of the survey must be submitted to the Los Angeles Water Board at least **six months** prior to the end of the permit (permit expiration, April 30, 2029). The Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, shall approve the study design. The study design is due to the Los Angeles Water Board within **one year** of the effective date of this Order. Based on the study results, the Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits and/or may require additional test organisms.

d. **Regional ASBS Monitoring**

Participation in a collaborative regional or statewide ASBS monitoring effort is encouraged. After the first year of monitoring results are reviewed (in 2025), the Los Angeles Water Board, in consultation with the State Water Board's Division of Water Quality, may adjust the sediment, receiving water, and bioaccumulation monitoring required under this exception, based on the Facility's participation in an appropriate regional or statewide monitoring program.

During the last permit cycle, the Discharger participated in the Bight '18, 2022 Rocky Intertidal Study.

e. Subtidal Sediment Monitoring

Special Provision V.C.2.e is based on condition 2.n of Resolution No. 2006-0013. As required in this Order, the Discharger is required to collect samples of the subtidal sediment near the seawater discharge system and storm water outfall in Big Fisherman Cove and analyze the sample for Ocean Plan Table 3 constituents. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* shall be performed. Based on the first year sample results, the Los Angeles Water Board will determine specific constituents to be tested during the remainder of the permit cycle, except that acute toxicity for sediment shall be tested annually.

The Discharger conducted annual monitoring events per the Ocean Plan constituents. Concentrations of constituents in sediment were generally not detected, with the exception of most metals, which were found in relatively low but detectable concentrations. No toxicity was observed in sediments using amphipod *Eohaustorius estuaries*.

f. Receiving Water Monitoring Report

Special Provision V.C.2.f. is based on condition 2.p. of Resolution No. 2006-0013 and is necessary to provide information to the Los Angeles Water Board of potential impacts to the ASBS and steps taken to prevent alteration of natural water quality.

The Discharger indicated that no alteration of natural water quality measured based on the results of routine monitoring during the previous five year period. Therefore, no receiving water monitoring report was required to be submitted.

6.3. Best Management Practices and Pollution Prevention

6.3.1. Stormwater Management Plan (SWMP)

The requirements of special condition VI.C.3.a are based on conditions 2.e, f, g, h, and i of Resolution No. 2006-0013, which collectively require the Discharger to develop and implement a SWMP designed to prevent all discharges of non-storm water facility runoff. This Order requires the Discharger to update and continue to implement the SWMP as approved by the Los Angeles Water Board. The SWMP shall incorporate the requirements of the Stormwater Pollution Prevention Plan (SWPPP), the Best Management Practices Plan (BMPP), and Spill Contingency Plan (SCP) for minimizing stormwater runoff pollution and for preventing contaminated stormwater runoff from being discharged directly to the Pacific Ocean.

- a. **Stormwater Pollution Prevention Plan (SWPPP).** The SWPPP shall outline site-specific management processes for minimizing stormwater runoff pollution and for preventing contaminated stormwater runoff from being discharged directly into the Big Fisherman Cove. At a minimum, the management practices shall ensure that raw materials and chemicals do not come into contact with stormwater. SWPPP requirements are included as Attachment G, based on 40 CFR section 122.44(k).

- b. **Best Management Practices Plan (BMPP).** The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment and to ensure that unauthorized non-stormwater discharges (i.e., spills) do not occur at the Facility. The BMPP shall incorporate the requirements contained in Attachment G. Attachment G requires a discussion on the effectiveness of each BMP to reduce or prevent pollutants in stormwater discharges.
- c. **Spill Contingency Plan (SCP).** The SCP shall include a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events at the site. This provision is included in this Order to minimize and control the amount of pollutants discharged in case of a spill. The SCP shall be site specific and shall cover all areas of the Facility.

6.4. Construction, Operation, and Maintenance Specifications

6.4.1. Construction Activities

This provision included in Section 6.3.4 of the Waste Discharge Requirements of this Order is based on the requirements of 40 CFR section 122.41(e).

6.4.2. Climate Change Effects Vulnerability Assessment and Mitigation Plan

The Permittee is required to address potential climate change impacts through the development and implementation of a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan), which is due 12 months after the effective date of this Order. This requirement is based on the need to adapt to and mitigate the effects of climate change on permitted facilities as described in State Water Board's Resolution No. 2017-0012 and the Los Angeles Water Board's Resolution No. R18-004.

6.5. Other Special Provisions

6.5.1. Implementing Nonpoint Source Management Plan

Special Provision V.C.5.a requires the Discharger to implement a Nonpoint Source Management Plan. As required in conditions 2.r of Resolution No. 2006-0013, the Discharger prepared a waterfront and marine operations nonpoint source management plan WFMP. Because the Discharger's site is located at the water's edge, potential pollutants at the site are subject to reduced buffering by natural processes. The Nonpoint Source Management Plan includes applicable management measures as described in the State's Nonpoint Source Program Implementation Plan for marinas and recreational boating. This permit requires the implementation of the Management Plan.

6.5.2. Program for Prevention of Biological Pollutants

The discharge has the potential to introduce invasive species or pathogenic organisms. Such accidental introductions could alter the marine community in an undesirable way. To prevent such introductions, condition 2.q of Resolution No. 2006-0013 requires the Discharger to pursue and implement a program for prevention of Biological Pollutants (non-native invasive species) in consultation

with the California Department of Fish and Game Marine Resources Division.
This requirement is incorporated into this Order as Special Provision 6.4.2.

6.5.3. Compliance Schedule – Not Applicable

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Los Angeles Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

7.1. Influent Monitoring

Resolution No. 2006-0013 specifies the reference station monitoring location as within Goat Harbor near Italian Gardens, which is over 6 shoreline miles from the intake structure. The location at the intake structure has not been determined to be free of anthropogenic sources of pollutants. For this reason and to eliminate redundancy, this Order discontinues monitoring requirements at the intake structure, with the exception of bacteria. Alternatively, as required in Resolution No. 2006-0013, the reference station, designated as REF-001, for determination of “natural water quality”, is in the ocean in the vicinity of Goat Harbor or Italian Gardens near Twin Rocks Point on the northern coast of Santa Catalina Island. See Section 7.4.1 below for further discussion of reference station monitoring requirements.

This Order includes monitoring requirements for indicator bacteria at INF-001 to satisfy the requirements of Resolution No. 2006-0013. Monitoring at the intake location provides a comparative basis of bacteria in source water versus effluent and receiving water and in turn indicates whether the Facility may be contributing bacteria to the discharge.

7.2. Effluent Monitoring

Monitoring for those pollutants expected to be present in discharges is required as shown in the MRP (Attachment E). To demonstrate compliance with effluent limitations, the Order retains and updates the monitoring requirements from Order No. R4-2013-0172-A01 to determine compliance with the effluent limitations for this Order.

7.3. Whole Effluent Toxicity (WET) Testing Requirements

WET protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until it gets to the higher level. For this permit, chronic toxicity in the discharge is limited and evaluated using USEPA’s 2010 TST hypothesis testing approach. The chronic toxicity effluent limitations are as stringent as necessary to protect the Ocean Plan Water Quality Objective for chronic toxicity.

Section III.C.3.c.(4) of the Ocean Plan requires dischargers to conduct chronic toxicity testing if the minimum initial dilution of the effluent is below 100:1. This Order includes monitoring requirements for chronic toxicity in the MRP (Attachment E). The discharges enter an ASBS and the Facility does not have dilution credit. These requirements satisfy the minimum toxicity requirements specified in Resolution No. 2006-0013.

7.4. Receiving Water Monitoring

7.4.1. Surface Water

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP to determine compliance with receiving water limitations established in the limitations and discharge requirements. The Facility is also required to perform general observations of the receiving water when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, fungi, slime, or objectionable growths.

Additionally, the Los Angeles Water Board is requiring that the Discharger conduct the reference station and receiving water monitoring.

a. Reference Station Monitoring at REF-001

Monitoring at the reference site REF-001 is required to determine whether the discharge is altering “natural water quality”. The reference site location was selected as it was determined to be relatively free from anthropogenic sources of pollutants. Condition 2.a. of Resolution No. 2006-0013 requires: “For constituents other than indicator bacteria, natural water quality will be determined using the reference station in the ocean in the vicinity of Goat Harbor or Italian Gardens near Twin Rocks Point on the northern coast of Santa Catalina Island. For indicator bacteria, the Ocean Plan bacteria objectives will be used.” The MRP of this Order incorporates the reference station monitoring requirements of Resolution No. 2006-0013.

The Ocean Plan contains implementation procedures for bacteria objectives which address minimum receiving water monitoring. Resolution 2006-0013 incorporates into the Ocean Plan mitigating conditions which address bacteria monitoring. The bacteria monitoring requirements in Resolution 2006-0013 therefore supersede the Ocean Plan section III.D Implementation Procedures for Bacterial Characteristics for this Order. As explained in Condition 2.o of Resolution 2006-0013 the bacteria monitoring requirements at the combined locations of the intake structure, effluent, reference station, and receiving water are meant to satisfy in total the Ocean Plan bacteria monitoring requirements.

b. Receiving Water Monitoring at RSW-001

Condition 2.m. of Resolution No. 2006-0013 specifies “Once annually, during wet weather (storm event), the storm water runoff effluent and the receiving water adjacent to the seawater and storm water discharge system must be sampled and analyzed for Ocean Plan Table 1 constituents. The receiving

water in Big Fisherman Cove must also be monitored for Ocean Plan indicator bacteria water quality objectives. The sample location for the receiving water will be immediately seaward of the surf zone in Big Fisherman Cove adjacent to the outfall location.” This Order includes monitoring requirements at RSW-001 to satisfy the condition 2.m. of Resolution No. 2006-0013.

7.4.2. Groundwater – Not Applicable

7.5. Other Monitoring Requirements

This Order includes additional monitoring requirements per the conditions of Resolution No. 2006-0013, including subtidal sediment monitoring, benthic marine life monitoring, and a metals bioaccumulation study.

7.5.1. **Stormwater Monitoring Requirements.** Because the discharge is comprised, in part, of stormwater, the Discharger is required to measure and record the rainfall each day of the month. The Discharger is also required to conduct visual observations of all stormwater discharges in the vicinity of the discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor.

8. PUBLIC PARTICIPATION

The Los Angeles Water Board is considering the issuance of WDRs that will serve as a NPDES permit for the Facility. As a step in the WDR adoption process, the Los Angeles Water Board staff has developed tentative WDRs. The Los Angeles Water Board encourages public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Los Angeles Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through email and public notice.

The public was provided access to the agenda and any changes in dates and locations through the Los Angeles Water Board’s website at:

<https://www.waterboards.ca.gov/losangeles>

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process electronically at:

losangeles@waterboards.ca.gov with a copy to bronwyn.kelly@waterboards.ca.gov.

To be fully responded to by staff and considered by the Los Angeles Water Board, the written comments were due at the Los Angeles Water Board office by **5:00 p.m. on April 22, 2024**. Written comments submitted after the deadline may not be accepted into the record or considered by the Los Angeles Water Board if doing so would prejudice any party or the Board.

8.3. Public Hearing

The Los Angeles Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: May 23, 2024
Time: 9:00 AM
Location: Junipero Serra Building (Carmel Room)
320 West 4th Street
Los Angeles, CA 90013

Interested people were invited to attend. At the public hearing, the Los Angeles Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Los Angeles Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a water quality petition for review, see:

https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

8.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Water Board by calling 213-576-6600.

The tentative WDRs, comments received and response to comments are also available on the Los Angeles Water Board's website at:

https://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/index.shtml

8.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Los Angeles Water Board, reference this facility, and provide a name, address, and phone number.

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Bronwyn Kelly at bronwyn.kelly@waterboards.ca.gov.

ATTACHMENT G – STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. IMPLEMENTATION SCHEDULE

A stormwater pollution prevention plan (SWPPP) shall be developed and submitted to the Los Angeles Water Board within 90 days following the effective date of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Los Angeles Water Board, or no later than 90 days from the date of the submittal of the SWPPP to the Los Angeles Water Board (whichever comes first).

2. OBJECTIVES

The SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges and authorized non-stormwater discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in stormwater discharges and authorized non-stormwater discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage). To achieve these objectives, facility operators should consider the five-phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Los Angeles Water Board inspectors.

3. PLANNING AND ORGANIZATION

3.1. Pollution Prevention Team.

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a stormwater pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities. The SWPPP shall clearly identify the permit related responsibilities, duties, and activities of each team member. For small facilities, stormwater pollution prevention teams may consist of one individual where appropriate.

3.2 Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, state, and federal requirements that impact, complement, or are consistent with the requirements of this permit. Facility operators should identify any existing facility plans that contain stormwater pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

**TABLE A
 FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL
 STORMWATER POLLUTION PREVENTION PLANS**

Phase	Tasks
Planning and Organization	Form Pollution Prevention Team Review other plans
Assessment Phase	Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-stormwater discharges Assess pollutant risks
Best management Practices Identification Phase	Non-structural BMPs Structural BMPs Select activity and site-specific BMPs
Implementation Phase	Train employees Implement BMPs Conduct recordkeeping and reporting
Evaluation/Monitoring	Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

4. SITE MAP

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

The following information shall be included on the site map:

- 4.1. The facility boundaries; the outline of all stormwater drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's stormwater discharges and authorized non-stormwater discharges may be received.
- 4.2. The location of the stormwater collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect stormwater discharges, authorized non-stormwater discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, skim ponds, diversion barriers, etc.
- 4.3. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- 4.4. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section 6.1.4. below have occurred.
- 4.5. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials¹ handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section 4.5. above, associated potential pollutant sources and potential pollutants that could be discharged in stormwater discharges or authorized non-stormwater discharges. At a minimum, the following items related to the facility's industrial activities shall be considered:

¹ "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with stormwater discharges.

- 6.1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process.
- 6.2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
- 6.3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.
- 6.4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in stormwater discharges or authorized non-stormwater discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (CFR), part 302) that have been discharged to stormwater as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR, parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to stormwater or non-stormwater discharges, and the preventative measures taken to ensure spills or leaks do not reoccur. The list shall be updated as appropriate during the term of this Order.
- 6.5. **Non-Stormwater Discharges.** Facility operators shall investigate the facility to identify all non-stormwater discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-stormwater discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-stormwater discharges and associated drainage area.

Non-stormwater discharges that are not authorized by this Permit, other waste discharge requirements, or other NPDES permits are prohibited. The SWPPP must include BMPs to prevent or reduce contact of authorized non-stormwater discharges with significant materials (as defined in Footnote 1 of section 5 above) or equipment,
- 6.6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, stormwater discharges associated with industrial activity, or authorized non-stormwater discharges.

6.7. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.

The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similarly to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section 8 below.

7. **ASSESSMENT OF POTENTIAL POLLUTANT SOURCES**

The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in section 6 above to determine:

- 7.1 Which areas of the facility are likely sources of pollutants in stormwater discharges and authorized non-stormwater discharges, and
- 7.2 Which pollutants are likely to be present in stormwater discharges and authorized non-stormwater discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current stormwater BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to stormwater or authorized non-stormwater discharges; history of spill or leaks; and run-on from outside sources.

Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in stormwater discharges and authorized non-stormwater discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source.

8. **STORMWATER BEST MANAGEMENT PRACTICES**

8.1. The SWPPP shall include a narrative description of the stormwater BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections 5 and 6 above). The BMPs shall be developed and implemented to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

**TABLE B
 EXAMPLE
 ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND
 CORRESPONDING BEST MANAGEMENT PRACTICES
 SUMMARY**

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spill and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	Fuel oil	Use spill and overflow protection. Minimize run-on of stormwater into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source similar to Table B.

8.2. Facility operators shall consider the following BMPs for implementation at the facility:

8.2.1. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with stormwater discharges and authorized non-stormwater discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs before considering additional structural BMPs. Below is a list of non-structural BMPs that should be considered:

- **Good Housekeeping.** Consists of practical procedures to maintain a clean and orderly facility.
- **Preventive Maintenance.** Includes the regular inspection and maintenance of structural stormwater controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.
- **Spill Response.** Includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
- **Material Handling and Storage.** Includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to stormwater and authorized non-stormwater discharges.
- **Employee Training.** Includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing stormwater. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
- **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
- **Recordkeeping and Internal Reporting.** Includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.
- **Erosion Control and Site Stabilization.** Includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.
- **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.
- **Quality Assurance.** Includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

8.2.2. Structural BMPs

When non-structural BMPs as identified above are ineffective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in stormwater discharges and

authorized non-stormwater discharges. Below is a list of potential structural BMPs:

- **Overhead Coverage.** Includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges.
- **Retention Ponds.** Includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow stormwater to discharge from the facility.
- **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
- **Secondary Containment Structures.** Includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
- **Treatment.** Includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in stormwater discharges and authorized non-stormwater discharges.

9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The facility operator shall conduct one comprehensive site compliance evaluation each year. The SWPPP shall be revised, as appropriate, and submitted to the Los Angeles Water Board along with the annual monitoring report. The revisions shall be implemented no later than 90 days after submission. The evaluation is subject to review by the Los Angeles Water Board Executive Officer and modifications may be required. Evaluations shall include the following:

- 9.1. A review of all visual observation records, inspection records, and sampling and analysis results.
- 9.2. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- 9.3. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- 9.4. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section 10.3. below for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be

submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 5.4.5 of Attachment D.

10. SWPPP GENERAL REQUIREMENTS

- 10.1. The SWPPP shall be retained onsite and made available upon request of a representative of the Los Angeles Water Board and/or local stormwater management agency (local agency) which receives the stormwater discharges.
- 10.2. The Los Angeles Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Los Angeles Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Los Angeles Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Los Angeles Water Board and/or local agency that the revisions have been implemented.
- 10.3. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in stormwater discharge, (ii) cause a new area of industrial activity at the facility to be exposed to stormwater, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- 10.4. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Order.
- 10.5. When any part of the SWPPP is infeasible to implement by the deadlines specified in this Order due to proposed significant structural changes, the facility operator shall submit a report to the Los Angeles Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. Such reports are subject to Los Angeles Water Board approval and/or modifications. Facility operators shall provide written notification to the Los Angeles Water Board within 14 days after the SWPPP revisions are implemented.
- 10.6. The SWPPP shall be provided, upon request, to the Los Angeles Water Board. The SWPPP is considered a report that shall be available to the public by the Los Angeles Water Board under Section 308(b) of the Clean Water Act.